FIIG T247
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FEDERAL ITEM IDENTIFICATION GUIDE

DRIERS, DEHYDRATORS, AND ANHYDRATORS

This Reprint replaces FIIG T247, dated 28 Apr 89, and incorporates all Changes, Errata, and Notices.

Commander

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This Federal Item Identification Guide for Supply Cataloging is issued under the authority of Department of Defense Instruction 5025.7.

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BY ORDER OF THE DIRECTOR

/s/

Commander

Defense Logistics Information Service

Contents

GENERAL INFORMATION

1. Purpose and Scope

This Federal Item Identification Guide (FIIG) is a self-contained document for the collection, coding, transmittal, and retrieval of item characteristics and related supply management data for an item of supply for logistical use. This FIIG is to be used to describe items of supply identified by the index of approved item names appearing in this section.

2. Contents

This FIIG is comprised of the following:

Index of Approved Item Names Covered by this FIIG
Applicability Key Index
Section I - Item Characteristics Data Requirements
Section III - New text that should be here.
Appendix A - Reply Tables
Appendix B - Reference Drawing Groups (as applicable)
Appendix C - Technical Data Tables (as applicable)

a. Index of Approved Item Names Covered by this FIIG:

The index lists the approved item names with definitions and item name codes as they appear in Cataloging Handbook H6, applicable to this FIIG. In addition, each name entry is assigned an applicability key for use in relating the characteristics requirements in Section I to the specific item name.

b. Applicability Key Index:

The purpose of this index is to provide the user with a ready reference for determining the specific requirements which are applicable to a given approved item name. This index lists all requirements in sequence as they appear in the FIIG. The applicability of a Master Requirement Coded requirement is indicated by the column headed by the specific item name applicability key as follows:

(1) The letter "X" indicates the requirement must be answered for a full descriptive item.

(2) The letters "AR" indicate the requirement is to be answered as required by (1) instructional notes within the FIIG; (2) when the reply is predicated on replies to a related main requirement; or (3) when an asterisk (*) is used in conjunction with the applicability key column in Section I.

(3) A blank in the column indicates the requirement is not applicable to the specific item name.

c. Section I - Item Characteristics Data Requirements:

This section contains the physical and performance characteristics requirements needed to describe and identify an item of supply. These characteristics differentiate one item from all other items of supply and are to be used to meet the needs of all supported functions. This section is arranged in columns. Identification of each column and instructions pertinent thereto are as follows:

(1) Applicability Key:

The first column shows the applicability key(s) for each requirement. It indicates whether the requirement need be satisfied for the item being identified. "ALL" indicates that the requirement must be answered for all items covered by the FIIG. One or more alphabetic character(s) or group of one or more alphabetic characters indicates a response is required when describing items with an approved item name or names represented by the key(s). An asterisk (*) used in conjunction with any applicability key indicates that the characteristic stated in the requirement may not be applicable to all items covered by the FIIG.

(2) Master Requirement Codes (MRC):

A four-position code which is assigned to a FIIG requirement for identification of the requirement, cross-referencing requirements in the various sections and appendices of the FIIG, and for mechanized processing and retrieval of FIIG generated data. Absence of a MRC for a requirement indicates a lead-in to requirements with individual MRCs in Appendix B.

(a) The coding technique for providing MULTIPLE/OPTIONAL responses will not be used for a Section I requirement assigned Mode Code A or L that leads to Appendix B sketches with dimensional requirements.

(b) Identified Secondary Address Coding:

This technique is for extending the Master Requirement Code so that a unique address is provided for each application of the requirement in relation to the item and is authorized only as instructed within the requirement. Responses coded through this technique will always consist of the following: (1) Master Requirement Codes, (2) indicator code (a single numeric character determined by the number of positions contained), (3) identified secondary address code (1 to 3-digit alphabetic codes determined by the number of predicted replies), (4) the mode code, (5) the reply code and/or clear text response, and (6) end with a record separator (*). Steps (1) through (6) are repeated for each application of the requirement.

(c) AND/OR coding:

A technique for extending the Master Requirement Code to provide a distinctive address for multiple responses to the same requirement. Responses coded through this technique will always consist of (1) Master Requirement Code, (2) mode code, (3) the response or reply code (as instructed by the requirement), (4) a single dollar sign ($) for an OR condition, or a double dollar sign ($$) for an AND condition, (5) the mode code, (6) the response or reply code

(followed by conditions (4) through (6) for each of the multiple responses) and (7) end with a record separator (*). NOTE: Apply this technique only when instructed by the requirement sample reply (e.g.).

(3) Mode Code:

A one-position alphabetic code that specifies the manner in which a response will be prepared. Each requirement assigned a MRC is also assigned a mode code. Sample replies follow each FIIG requirement displaying the proper construction of a response for the assigned mode code. The response to a requirement will always be prepared in accordance with the assigned mode code and sample reply except in the following instances:

(a) Use of E Mode Code replies is not authorized. If a reply needed to describe an item is not listed in the applicable table, contact the FIIG Initiator.

(b) Mode Code K may not be used for any requirement unless instructed by the requirement instructions.

(4) Requirement:

This portion includes the characteristics data elements and data use identifiers required to identify and differentiate one item of supply from another, narrative definitions, and explanations as to use and method of expression. Instructions for coding and preparing replies are also provided.

(5) Reply Code:

A code that represents an established authorized reply to a requirement.

d. Section III - Supplementary Technical and Supply Management Data:

This section includes those characteristics requirements necessary to support specific logistics functions other than National Stock Number assignment.

e. Appendix A - Reply Tables:

Tables of authorized replies to requirements and reply codes when the tables are too lengthy for inclusion in Section I/III, when applicable.

f. Appendix B - Reference Drawings:

This appendix contains representative illustrations which portray specific variations of one or more generic characteristics. If reference drawings contain requirements pages to be used in conjunction with illustrations for dimensioning purposes, the requirements pages will contain Master Requirement Codes, mode codes, and a statement of the requirement. A response to requirements on a requirements page is necessary only for those Master Requirement Codes applicable to the illustration selected.

g. Appendix C - Technical Data Tables:

This appendix contains conversion charts and similar data pertinent to the requirements in Section I/III, when applicable.

3. Enter administrative MRC CLQL immediately following the last FIIG requirement reply, as instructed below:

MRC	Mode Code	Requirement	Example
CLQL	G	COLLOQUIAL NAME (common usage name by which an item is known)	CLQLGWOVEN WIRE CLOTH*

4. Special Instructions and Indicator Definitions

a. Measurements:

Unless otherwise indicated within a requirement example, enter all measurements in decimal form, carried to the nearest three decimal places, with a minimum of one digit preceding the decimal. For SI (metric), enter all measurements with a minimum of one digit before and after the decimal. For fraction to decimal conversion, see Appendix C.

b. Indicators:

A cross hatch (#) following an AIN, MRC, Reply Code or Drawing Number indicates for "ALL EXCEPT USA" use only.

5. Indexes

a. Index of Data Requirements

This index is arranged in alphabetic sequence by Master Requirement Code, cross-referenced to the applicable data requirement and page number(s).

b. Index of Approved Item Names

This index is arranged in alphabetic sequence referenced to Applicability Key.

c. Applicability Key Index

This index is arranged in Applicability Key Sequence.

6. Maintenance

Requests for revisions and other changes will be directed to:

[Page Break]

MRC Index

INDEX OF APPROVED ITEM NAMES COVERED BY THIS FIIG

Approved Item Name	INC	App Key
CARTRIDGE, DEHYDRATOR	13512	BA

The primary inclosure containing a drying agent such as silica gel or activated alumina.

Dehumidifier

1. (Thermal) An equipment used to remove water vapor from ambient air by means of a desiccant from which the moisture is in turn removed by a heating unit(s) with or without fan(s) or blower(s) which are incorporated in the unit. Excludes those units which perform their action by refrigerating methods, and any equipment which operates by desiccants alone without the aid of heaters or blowers.

DEHUMIDIFIER (1), DESICCANT, ELECTRIC	07673	AB
DEHUMIDIFIER, PHOTOGRAPHIC FILM DRIER, ELECTRIC	19798	AC

A device used to remove water vapor from ambient air by means of a refrigeration system. It is designed for use with a photographic film drier.

Dehydrator

1. Equipment used to remove water from material excluding ambient air to below the normal moisture content of the material when exposed to the atmosphere.

DEHYDRATOR (1), DESICCANT, ELECTRIC	06692	AA

An electrically heated dehydrator for reactivating desiccants.

DEHYDRATOR UNIT, NONREACTIVATING	20530	BB

An item designed for use in the removal of moisture from air or gas pressure lines. Excludes SEPARATOR, PIPELINE.

DRIER, INFRARED	10223	CA

A heating device employing infrared lamps or infrared resistance elements for accelerating the drying process of chemical compounds, paints, or inclosures.

Approved Item Name	INC	App Key
FILTER-DRIER, REFRIGERANT	36434	DA

A device consisting of a metal cylinder filled or to be filled with a desiccant, placed in the liquid or suction line of a mechanical refrigeration system for the purpose of removing moisture and/or foreign matter. It may have an integral strainer.

APPLICABILITY KEY INDEX

	AA	AB	AC
NAME	X	X	X
ACDC	X	X	X
ELEC	X	X	X
ACUT	AR	AR	AR
FREQ	AR	AR	AR
FAAZ	AR	AR	AR
ABJL	AR	AR	AR
AZSR	X		
AZST	AR		
AZSW	AR		
AZSX	AR		
AEHZ	X		
WGHT	X	X	X
ABHP	AR	AR	AR
ABMK	AR	AR	AR
ABKW	AR	AR	AR
ADAV	AR	AR	AR
AFPM	X		
AZSZ		X	
AZTB		X	
AZTC		X	X
AZTD		X	
AZTE		X	X
AZTF		X	
AZTG		X	X
CWLW		X	X
AZTJ		X	X
FEAT	AR	AR	AR
TEST	AR	AR	AR
SPCL	AR	AR	AR
ZZZK	AR	AR	AR
ZZZT	AR	AR	AR
ZZZW	AR	AR	AR
ZZZX	AR	AR	AR
ZZZY	AR	AR	AR
CRTL	AR	AR	AR
PRPY	AR	AR	AR
ELRN	AR	AR	AR
ELCD	AR	AR	AR
AFJK	AR	AR	AR
ALCD	AR	AR	AR
AWJN	AR	AR	AR
SUPP	AR	AR	AR
ZZZV	AR	AR	AR
AGAV	AR	AR	AR

	BA	BB
NAME	X	X
AZSZ	X	
AXQD	X	
AAFZ	X	
AZTK	AR	AR
AZTL	AR	AR
AZTM	AR	AR
AZTN	AR	AR
ADNF	AR	
AZTP	X	
AZTQ	AR	
AKYD		AR
AGUC		AR
AGXZ		AR
FEAT	AR	AR
TEST	AR	AR
SPCL	AR	AR
ZZZK	AR	AR
ZZZT	AR	AR
ZZZW	AR	AR
ZZZX	AR	AR
ZZZY	AR	AR
CRTL	AR	AR
PRPY	AR	AR
ELRN	AR	AR
ELCD	AR	AR
AFJK	AR	AR
ALCD	AR	AR
AWJN	AR	AR
SUPP	AR	AR
ZZZV	AR	AR
AGAV	AR	AR

	CA
NAME	X
AMQY	X
AZSA	X
AZZH	X
AEWV	AR
AZZJ	X
ELEC	AR
ABJL	AR
BBCL	X
NMBR	AR
BBCP	X
AEZD	AR
AZZK	X
AZGM	X
ABHP	AR
ABMK	AR
ABKW	AR
FEAT	AR
TEST	AR
SPCL	AR
ZZZK	AR
ZZZT	AR
ZZZW	AR
ZZZX	AR
ZZZY	AR
CRTL	AR
PRPY	AR
ELRN	AR
ELCD	AR
AFJK	AR
ALCD	AR
AWJN	AR
SUPP	AR
ZZZV	AR
AGAV	AR

	DA
NAME	X
AZSZ	AR
APQB	X
AHUH	AR
AFSE	AR
ASFG	AR
SHPE	X
AZZM	AR
AZZN	X
CWMD	X
ABHP	X
AEUG	AR
AFRU	AR
AMRQ	AR
AZZT	AR
AWPR	X
AWPS	AR
STYL	AR
ACSV	AR
AJES	AR
ABKV	AR
AWME	AR
ACSU	AR
AWMF	AR
ABUJ	AR
AWMG	AR
AWMH	AR
AJYP	AR
AAJD	AR
AAJE	AR
AAJF	AR
CQRB	AR
AJFZ	AR
AHSJ	AR
AWMJ	AR
ABKU	AR
ADML	AR
ADMM	AR
ADMN	AR
ADME	AR
AWMK	AR
AWML	AR
AGSX	AR
CBBL	AR
FEAT	AR
TEST	AR
SPCL	AR
ZZZK	AR
ZZZT	AR
ZZZW	AR
ZZZX	AR
ZZZY	AR
CRTL	AR

PRPY	AR
ELRN	AR
ELCD	AR
AFJK	AR
ALCD	AR
AWJN	AR
SUPP	AR
ZZZV	AR
AGAV	AR

[Page Break]

Body

SECTION: A

APP Key	MRC	Mode Code	Requirements
ALL			
	NAME	D	ITEM NAME

Definition: A NOUN, WITH OR WITHOUT MODIFIERS, BY WHICH AN ITEM OF SUPPLY IS KNOWN.

Reply Instructions: Enter the applicable Item Name Code from the index appearing in the General Information Section. (e.g., NAMED06692*)

AA, AB, AC

CSBH J VOLTAGE IN VOLTS AND CURRENT TYPE

Definition: THE TOTAL ELECTRICAL VOLTAGE, EXPRESSED IN VOLTS, AND THE TYPE OF CURRENT WHETHER ALTERNATING OR DIRECT.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., CSBHJDC3.0; CSBHJAC110.0$$JAC120.0*)*

REPLY CODE	*REPLY (AN87)*	*Reply to MRCs*
AC	*AC*	*FREQ, FAAZ, ABJL*
AD	*AC/DC*	*ACUT, FREQ, FAAZ, ABJL*
DC	*DC*	*ACUT, ABJL*

AA*, AB*, AC*

ACUT B DIRECT CURRENT RATING IN AMPS

Definition: THE DIRECT CURRENT RATING FOR WHICH THE ITEM IS RATED, EXPRESSED IN AMPERES.

Reply Instructions: Enter the numeric value. (e.g., ACUTB0.75*)

For multiple replies use AND ($$) Coding, entering in the same sequence as MRC CSBH. (e.g.,

ACUTB6.00$$B12.00*)

AA*, AB*, AC*

FREQ B FREQUENCY IN HERTZ

Definition: THE CYCLES PER SECOND (HERTZ) OF THE ALTERNATING CURRENT.

Reply Instructions: Enter the numeric value. (e.g., FREQB60.0*)

For multiple AC frequencies use AND ($$) Coding, entering in the same sequence as MRC CSBH. (e.g.,

FREQB50.0$$B60.0*)

AA*, AB*, AC*

FAAZ D PHASE

Definition: THE NUMBER OF ALTERNATING CURRENT PHASES.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., FAAZDB*)

For multiple replies use AND ($$) Coding, entering the same sequence as MRC CSBH. (e.g.,

FAAZDA$$DB*)

REPLY CODE	REPLY (AD02)
A	SINGLE
E	SINGLE/THREE
C	THREE
B	TWO

AA*, AB*, AC*

ABJL B WATTAGE RATING IN WATTS

Definition: THE RATED POWER THAT AN ITEM CAN SAFELY CONSUME OR PROVIDE, MEASURED IN WATTS.

Reply Instructions: Enter the numeric value. (e.g., ABJLB500.0*)

For multiple replies use AND ($$) Coding, entering in the same sequence as MRC CSBH. (e.g.,

ABJLB120.0$$B180.0*)

AA

AZSR D DESICCANT CAPACITY TYPE

Definition: INDICATES THE TYPE OF DESICCANT CAPACITY PROVIDED FOR THE ITEM.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AZSRDAB*; AZSRDAB$$DAC*)

REPLY CODE	REPLY (AM69)
AB	BULK
AC	SELF-CONTAINED

NOTE FOR MRCS AZST, AZSW, AND AZSX: IF REPLY CODE AC IS ENTERED FOR MRC AZSR, REPLY TO MRCS AZST AND AZSW. IF REPLY CODE AB IS ENTERED FOR MRC AZSR, REPLY TO MRC AZSX.

AA* (See Note Above)

AZST A DESICCANT CONTAINER QUANTITY

Definition: THE NUMBER OF DESICCANT CONTAINERS PROVIDED.

Reply Instructions: Enter the quantity. (e.g., AZSTA28*)

AA* (See Note Preceding MRC AZST)

AZSW J DESICCANT CONTAINER CAPACITY

Definition: THE AMOUNT OF LIQUID, GRANULES, AND THE LIKE, THE CONTAINER WILL HOLD.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., AZSWJAS1.000*; AZSWJAN16.000*)

REPLY CODE	REPLY (AG67)
AN	OUNCES
AS	POUNDS

AA* (See Note Preceding MRC AZST)

AZSX J BULK CAPACITY

Definition: THE AMOUNT OF LIQUID, GRANULES, OR THE LIKE, OF BULK MATERIAL THE ITEM WILL HOLD.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., AZSXJAS28.000*; AZSXJAG196000.000*)

REPLY CODE	REPLY (AG67)
CY	CUBIC FEET
AG	GRAINS
AN	OUNCES
AS	POUNDS

AA

AEHZ J MAXIMUM OPERATING TEMP

Definition: THE MAXIMUM TEMPERATURE AT WHICH THE ITEM IS RATED TO OPERATE FOR AN EXTENDED PERIOD OF TIME.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., AEHZJF350.0*; AEHZJC177.0*)

REPLY CODE	REPLY (AB36)
C	DEG CELSIUS (centigrade)
F	DEG FAHRENHEIT

AA, AB, AC

WGHT J WEIGHT

Definition: A RELATIVE MEASURE OF THE MASS OF AN ITEM WITH RESPECT TO ITS DENSITY.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., WGHTJP20.0*; WGHTJU320.0*)

REPLY CODE	REPLY (AB10)
U	OUNCES
P	POUNDS

AA*, AB*, AC*

ABHP J OVERALL LENGTH

Definition: THE DIMENSION MEASURED ALONG THE LONGITUDINAL AXIS WITH TERMINATED POINTS AT THE EXTREME ENDS OF THE ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABHPJAA8.000*; ABHPJLA203.2*; ABHPJAB7.990$$JAC8.010*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

AA*, AB*, AC*

ABMK J OVERALL WIDTH

Definition: AN OVERALL MEASUREMENT TAKEN AT RIGHT ANGLES TO THE LENGTH OF AN ITEM, IN DISTINCTION FROM THICKNESS.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABMKJAA2.500*; ABMKJLA63.5*; ABMKJAB2.495$$JAC2.505*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

AA*, AB*, AC*

ABKW J OVERALL HEIGHT

Definition: THE DISTANCE MEASURED IN A STRAIGHT LINE FROM THE BOTTOM TO THE TOP OF AN ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABKWJAA2.500*; ABKWJLA63.5*; ABKWJAB2.490$$JAC2.510*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

AA*, AB*, AC*

ADAV J OVERALL DIAMETER

Definition: A MEASUREMENT OF THE LONGEST STRAIGHT LINE ACROSS A CIRCULAR CROSS-SECTIONAL PLANE.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ADAVJAA2.400*; ADAVJLA61.0*; ADAVJAB2.390$$JAC2.410*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

AA

AFPM D ASSEMBLY FORM

Definition: THE FORM OF ASSEMBLY IN WHICH THE ITEM IS SUPPLIED, WHETHER COMPLETELY ASSEMBLED OR SPECIFYING A DEGREE OF ASSEMBLY WHICH INHERENTLY DESCRIBES THE PRESENCE OF A SPACE SAVING FEATURE.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AFPMDAR*)

REPLY CODE	REPLY (AE33)
A	ANY ACCEPTABLE
AR	ASSEMBLED
AS	PREFABRICATED FOR LOCAL ERECTION

AB

AZSZ D DESICCANT TYPE

Definition: INDICATES THE TYPE OF DRYING AGENT USED IN THE ITEM.

Reply Instructions: Enter the applicable Reply Code from Appendix A , Table 2. (e.g., AZSZDAAN*; AZSZDAAP$DAAQ*; AZSZDAAN$$DAAW*)

AB

AZTB A DESICCANT BED QUANTITY

Definition: THE NUMBER OF DESICCANT BEDS PROVIDED.

Reply Instructions: Enter the quantity. (e.g., AZTBA2*)

AB, AC

AZTC J DEHUMIDIFIED AIR DELIVERY

Definition: THE AMOUNT OF DEHUMIDIFIED AIR DELIVERED BY THE ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AZTCJBDA500.000*; AZTCJDWA14.16*; AZTCJBDB475.000$$JBDC525.000*)

For items that do not require a rating, change the Mode Code to K and enter Reply Code N. (e.g., AZTCKN*)

Table 1

REPLY CODE	REPLY (AB49)
BD	CUBIC FEET PER MINUTE
DW	CUBIC METERS PER MINUTE

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

AB

AZTD J DEHUMIDIFIED AIR DELIVERY PRESSURE

Definition: THE PRESSURE OF DEHUMIDIFIED AIR DELIVERED BY THE ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AZTDJARA300.000*; AZTDJBTA7620.0*; AZTDJARB295.000$$JARC305.000*)

For items that do not require a rating, change the Mode Code to K and enter Reply Code N. (e.g., AZTDKN*)

Table 1

REPLY CODE	REPLY (AG20)
AR	INCHES OF WATER
BT	MILLIMETERS OF WATER

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

AB, AC

AZTE J REACTIVATED AIR DELIVERY

Definition: THE AMOUNT OF REACTIVATED AIR DELIVERED BY THE ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AZTEJBDA100.000*; AZTEJDWA2.83*; AZTEJBDB95.000$$JBDC105.000*)

For items that do not require a rating, change the Mode Code to K and enter Reply Code N. (e.g., AZTEKN*)

Table 1

REPLY CODE	REPLY (AB49)
BD	CUBIC FEET PER MINUTE
DW	CUBIC METERS PER MINUTE

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM

C	MAXIMUM

AB

AZTF J REACTIVATED AIR DELIVERY PRESSURE

Definition: THE PRESSURE OF THE REACTIVATED AIR DELIVERED BY THE ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AZTFJARA0.700*; AZTFJBTA17.8*; AZTFJARB0.695$$JARC0.705*)

For items that do not require a rating, change the Mode Code to K and enter Reply Code N. (e.g., AZTFKN*)

Table 1

REPLY CODE	REPLY (AG20)
AR	INCHES OF WATER
BT	MILLIMETERS OF WATER

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

AB, AC

AZTG J WATER WEIGHT REMOVED PER OPERATIONAL HOUR

Definition: THE AMOUNT OF WATER REMOVED BY THE ITEM EACH HOUR OF OPERATION, EXPRESSED BY WEIGHT.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., AZTGJAS5.500*; AZTGJAJ2.5*)

For items that do not require a rating, change the Mode Code to K and enter Reply Code N. (e.g., AZTGKN*)

REPLY CODE	REPLY (AG67)
AJ	KILOGRAMS
AS	POUNDS

AB, AC

CWLW J INPUT TEMP RATING

Definition: THE INPUT TEMPERATURE RATING OF THE ITEM.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. Precede negative values with an M. Values not preceded with an M will be assumed to represent positive values. (e.g., CWLWJFM10.0*; CWLWJCM23.3*;

For items that do not require a rating, change the Mode Code to K and enter Reply Code N. (e.g., CWLWKN*)

REPLY CODE	REPLY (AB36)
C	DEG CELSIUS
F	DEG FAHRENHEIT

AB, AC

AZTJ B INPUT RELATIVE HUMIDITY IN PERCENT

Definition: THE INPUT RELATIVE HUMIDITY OF THE ITEM, EXPRESSED IN PERCENT.

Reply Instructions: Enter the numeric value. (e.g., AZTJB35.0*)

SECTION: B

APP Key	MRC	Mode Code	Requirements
ALL			
	NAME	D	ITEM NAME

Definition: A NOUN, WITH OR WITHOUT MODIFIERS, BY WHICH AN ITEM OF SUPPLY IS KNOWN.

Reply Instructions: Enter the applicable Item Name Code from the index appearing in the General Information Section.(e.g., NAMED13512*)

BA			
	AZSZ	D	DESICCANT TYPE

Definition: INDICATES THE TYPE OF DRYING AGENT USED IN THE ITEM.

Reply Instructions: Enter the applicable Reply Code from Appendix A , Table 2. (e.g., AZSZDAAW*; AZSZDAAP$DAAQ*; AZSZDAAT$$DAAW*)

BA			
	AXQD	J	CAPACITY

Definition: A MEASUREMENT OF THE CAPACITY OF AN ITEM.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., AXQDJCP50.000*; AXQDJCA819500.0*)

REPLY CODE	REPLY (AG67)
CP	CUBIC INCHES
CA	CUBIC MILLIMETERS

BA			
	AAFZ	D	BODY MATERIAL

Definition: THE BASIC MATERIAL OF WHICH THE BODY IS FABRICATED.

Reply Instructions: Enter the applicable Reply Code from Appendix A , Table 3. (e.g., AAFZDAL0000*; AAFZDAS0000$DBR0000*; AAFZDAL0000$$DPC0000*)

BA*, BB*			
	AZTK	J	BODY OVERALL HEIGHT

APP Key	MRC	Mode Code	Requirements

Definition: THE DISTANCE MEASURED IN A STRAIGHT LINE FROM THE BOTTOM TO THE TOP OF THE BODY.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AZTKJAA1.750*; AZTKJLA44.5*; AZTKJAB1.740$$JAC1.760*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

BA*, BB*

AZTL J BODY OVERALL LENGTH

Definition: THE DIMENSION MEASURED ALONG THE LONGITUDINAL AXIS WITH TERMINATED POINTS AT THE EXTREME ENDS OF THE BODY.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AZTLJAA9.000*; AZTLJLA228.6*; AZTLJAB8.975$$JAC9.025*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

BA*, BB*

AZTM J BODY OVERALL WIDTH

APP Key	MRC	Mode Code	Requirements

Definition: AN OVERALL MEASUREMENT TAKEN AT RIGHT ANGLES TO THE LENGTH OF THE BODY, IN DISTINCTION FROM THICKNESS.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AZTMJAA2.500*; AZTMJLA63.5*; AZTMJAB2.490$$JAC2.510*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

BA*, BB*

AZTN J BODY OVERALL DIAMETER

Definition: A MEASUREMENT OF THE LONGEST STRAIGHT LINE ACROSS A CIRCULAR CROSS-SECTIONAL PLANE OF A BODY.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AZTNJAA1.780*; AZTNJLA45.2*; AZTNJAB1.775$$JAC1.800*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

BA*

ADNF D FILTERING MATERIAL

APP Key	MRC	Mode Code	Requirements

Definition: THE ELEMENT, COMPOUND, OR MIXTURE OF WHICH THE FILTERING MATERIAL IS COMPOSED.

Reply Instructions: Enter the applicable Reply Code from Appendix A , Table 3. (e.g., ADNFDAS0000*; ADNFDAS0000$$DBR0000*; ADNFDAS0000$DBR0000*)

BA

AZTP D DISPERSION TUBE

Definition: AN INDICATION OF WHETHER OR NOT A DISPERSION TUBE IS INCLUDED.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AZTPDB*)

REPLY CODE	REPLY (AA49)
B	INCLUDED
C	NOT INCLUDED

BA*

AZTQ D LINE TYPE FOR WHICH DESIGNED

Definition: INDICATES THE TYPE OF LINE FOR WHICH THE ITEM IS DESIGNED.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AZTQDAAT*)

REPLY CODE	REPLY (AK31)
AAT	LIQUID
AAS	SUCTION

BB*

AKYD G ACCESSORY COMPONENTS AND QUANTITY

Definition: THE NAME AND NUMBER OF PARTS SUPPLIED WITH THE ITEM WHICH MAY BY REQUIRED FOR APPLICATION.

APP Key	MRC	Mode Code	Requirements

Reply Instructions: Enter the reply in clear text. (e.g., AKYDG1 FILTER*)

BB*

AGUC A UNIT PACKAGE QUANTITY

Definition: THE NUMBER OF ITEMS CONTAINED IN THE UNIT PACKAGE.

Reply Instructions: Enter the quantity. (e.g., AGUCA2*)

NOTE FOR MRC AGXZ: IF A REPLY IS ENTERED FOR MRC AGUC, REPLY TO MRC AGXZ.

BB* (See Note Above)

AGXZ D UNIT PACKAGE TYPE

Definition: INDICATES THE TYPE OF CONTAINER IN WHICH THE ITEM OF SUPPLY IS PACKAGED.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AGXZDAB*)

REPLY CODE	REPLY (AE96)
AB	BOX
AJ	CARTON

SECTION: C

APP Key	MRC	Mode Code	Requirements
ALL			
	NAME	D	ITEM NAME

Definition: A NOUN, WITH OR WITHOUT MODIFIERS, BY WHICH AN ITEM OF SUPPLY IS KNOWN.

Reply Instructions: Enter the applicable Item Name Code from the index appearing in the General Information Section. (e.g., NAMED10223*)

CA

AMQY	D	INSTALLATION DESIGN

Definition: THE INSTALLATION FOR WHICH THE ITEM IS DESIGNED.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AMQYDAJ*)

REPLY CODE	REPLY (AJ17)
AJ	FIXED
AF	PORTABLE

CA

AZSA	A	HEAT SOURCE QUANTITY

Definition: THE NUMBER OF HEAT SOURCES USED IN THE ITEM.

Reply Instructions: Enter the quantity. (e.g., AZSAA2*)

CA

AZZH	D	HEAT SOURCE FOR WHICH DESIGNED

Definition: THE HEAT SOURCE FOR WHICH THE ITEM IS DESIGNED.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AZZHDAMW*)

REPLY CODE	REPLY (AK54)
AMW	LAMP
AMX	RESISTANCE ELEMENT

APP Key	MRC	Mode Code	Requirements

NOTE FOR MRC AEWV: IF REPLY CODE AMW IS ENTER FOR MRC AZZH, REPLY TO MRC AEWV.

CA* (See Note Above)

AEWV L LAMP BASE STYLE

Definition: THE STYLE DESIGNATION INDICATING THE CONFIGURATION THAT MOST NEARLY CORRESPONDS TO THE BASE OF THE LAMP.

Reply Instructions: Enter the group designator and applicable style number from Appendix B , Reference Drawing Group A. (e.g., AEWVLA55*)

CA

AZZJ D HEAT SOURCE

Definition: AN INDICATION OF WHETHER OR NOT A HEAT SOURCE IS INCLUDED.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AZZJDB*)

REPLY CODE	REPLY (AA49)
B	INCLUDED
C	NOT INCLUDED

NOTE FOR MRCS ELEC AND ABJL: IF REPLY CODE B IS ENTERED FOR MRC AZZJ, REPLY TO MRCS ELEC AND ABJL.

CA* (See Note Above)

ELEC B VOLTAGE IN VOLTS

Definition: THE TOTAL ELECTRICAL VOLTAGE.

Reply Instructions: Enter the numeric value. (e.g., ELECB12.0*)

For multiple voltages for the same type of current, use AND ($$) Coding, entering in ascending sequence. If multiple voltages represent AC and DC currents, enter AC voltages first. (e.g., ELECB220.0$$B440.0)*

APP Key	MRC	Mode Code	Requirements

CA* (See Note Preceding MRC ELEC)

ABJL B WATTAGE RATING IN WATTS

Definition: THE RATED POWER THAT AN ITEM CAN SAFELY CONSUME OR PROVIDE, MEASURED IN WATTS.

Reply Instructions: Enter the numeric value. (e.g., ABJLB1000.0*)

For multiple replies use AND ($$) Coding, entering in the same sequence as MRC ELEC. (e.g., ABJLB500.0$$B600.0)*

CA

BBCL D HEAT SOURCE HOLDER TYPE

Definition: INDICATES THE TYPE OF HEAT SOURCE HOLDER PROVIDED.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., BBCLDBL*)

For multiple replies use AND ($$) Coding, entering in reply table sequence. (e.g., BBCLDBL$$DBM)*

A unit is a single separate reflector with its heat source, a strip is a series of two or more reflectors with heat sources arranged in a single row, and a panel is any arrangement of three or more heat sources not arranged as a strip.

REPLY CODE	REPLY (AF72)
BL	PANEL
BM	STRIP
BN	UNIT

CA*

NMBR A QUANTITY

APP Key	MRC	Mode Code	Requirements

Definition: A NUMERIC VALUE WHICH REPRESENTS A POSITIVE WHOLE VALUE WITHOUT REGARD TO ANY UNIT OF MEASURE.

Reply Instructions: Enter the quantity. (e.g., NMBRA4*)

For multiple replies use AND ($$) Coding, entering in the same sequence as MRC BBCL. (e.g., NMBRA4$$A5)*

CA

BBCP A HEAT SOURCE QUANTITY PER HOLDER

Definition: THE NUMBER OF HEAT SOURCES EACH HOLDER IS DESIGNED TO HOLD.

Reply Instructions: Enter the quantity. (e.g., BBCPA4*)

For multiple replies use AND ($$) Coding, entering in the same sequence as MRC BBCL. (e.g., BBCPA4$$A5)*

CA*

AEZD D SWITCH

Definition: AN INDICATION OF WHETHER OR NOT A DEVICE USED TO OPEN OR CLOSE AN ELECTRICAL CIRCUIT IS INCLUDED WITH THE ITEM.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AEZDDB*)

REPLY CODE	REPLY (AA49)
B	INCLUDED
C	NOT INCLUDED

CA

AZZK D WIRED FEATURE

Definition: AN INDICATION OF WHETHER OR NOT A WIRED FEATURE IS INCLUDED.

APP Key	MRC	Mode Code	Requirements

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AZZKDB*)

REPLY CODE	REPLY (AA49)
B	INCLUDED
C	NOT INCLUDED

CA

AZGM D MOUNTING FACILITY

Definition: THE FACILITY FOR MOUNTING THE ITEM.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., AZGMDAFH*; AZGMDAFH$$DAKL*)

REPLY CODE	REPLY (AM39)
A	ANY ACCEPTABLE
AFH	CASTER
AKL	CLAMP TYPE BASE
AKM	RECTANGULAR BASE
AKN	TRIANGULAR LEG
AKP	WHEEL

CA*

ABHP J OVERALL LENGTH

Definition: THE DIMENSION MEASURED ALONG THE LONGITUDINAL AXIS WITH TERMINATED POINTS AT THE EXTREME ENDS OF THE ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABHPJAA8.000*; ABHPJLA203.2*; ABHPJAB7.975$$JAC8.025*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL

APP Key	MRC	Mode Code	Requirements
		B	MINIMUM
		C	MAXIMUM

CA*

ABMK J OVERALL WIDTH

Definition: AN OVERALL MEASUREMENT TAKEN AT RIGHT ANGLES TO THE MEASURED LENGTH OF AN ITEM, IN DISTINCTION FROM THICKNESS.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABMKJAA2.500*; ABMKJLA63.5*; ABMKJAB2.490$$JAC2.510*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

CA*

ABKW J OVERALL HEIGHT

Definition: THE DISTANCE MEASURED IN A STRAIGHT LINE FROM THE BOTTOM TO THE TOP OF AN ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABKWJAA2.500*; ABKWJLA63.5*; ABKWJAB2.490$$JAC2.510*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)

FIIG T
Section Parts

APP Key	MRC	Mode Code	Requirements
		A	NOMINAL
		B	MINIMUM
		C	MAXIMUM

SECTION: D

APP Key	MRC	Mode Code	Requirements
ALL			
	NAME	D	ITEM NAME

Definition: A NOUN, WITH OR WITHOUT MODIFIERS, BY WHICH AN ITEM OF SUPPLY IS KNOWN.

Reply Instructions: Enter the applicable Item Name Code from the index appearing in the General Information Section. (e.g., NAMED13451*)

DA*			
	AZSZ	D	DESICCANT TYPE

Definition: INDICATES THE TYPE OF DRYING AGENT USED IN THE ITEM.

Reply Instructions: Enter the applicable Reply Code from Appendix A , Table 2. (e.g., AZSZDAAN*; AZSZDAAN$DAAP*; AZSZDAAN$$DAAP*)

DA			
	APQB	D	UNIT TYPE

Definition: INDICATES THE TYPE OF UNIT.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., APQBDAEM*)

REPLY CODE	REPLY (AK95)
A	ANY ACCEPTABLE
AEK	NONREFILLABLE
AEL	REFILLABLE BULK
AEM	REFILLABLE CARTRIDGE

NOTE FOR MRCS AHUH, AFSE, AND ASFG: IF REPLY CODE AEM IS ENTERED FOR MRC APQB, REPLY TO MRCS AHUH, AFSE, AND ASFG.

DA* (See Note Above)			
	AHUH	A	CARTRIDGE QUANTITY

Definition: THE NUMBER OF CARTRIDGES OF WHICH THE GROUPING IS COMPOSED.

APP Key	MRC	Mode Code	Requirements

Reply Instructions: Enter the quantity. (e.g., AHUHA3*)

DA* (See Note Preceding MRC AHUH)

AFSE J CARTRIDGE OVERALL DIAMETER

Definition: THE OVERALL LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF A CARTRIDGE, AND TERMINATES AT THE CIRCUMFERENCE.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AFSEJAA2.000*; AFSEJLA50.8*; AFSEJAB1.990$$JAC2.010*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA* (See Note Preceding MRC AHUH)

ASFG J CARTRIDGE LENGTH

Definition: A MEASUREMENT OF THE LONGEST DIMENSION OF A CARTRIDGE, IN DISTINCTION FROM WIDTH.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ASFGJAA6.000*; ASFGJLA152.4*; ASFGJAB5.975$$JAC6.025*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM

APP Key	MRC	Mode Code	Requirements
		C	MAXIMUM

DA

SHPE D SHAPE

Definition: THE PHYSICAL CONFIGURATION OF THE ITEM.

Reply Instructions: Enter the applicable Reply Code from the table below. (e.g., SHPEDBH*)

REPLY CODE	REPLY (AD07)
BH	ANGULAR
BK	STRAIGHT

NOTE FOR MRC AZZM: IF REPLY CODE BH IS ENTERED FOR MRC SHPE, REPLY TO MRC AZZM.

DA* (See Note Above)

AZZM J DISTANCE FROM OUTLET CENTERLINE TO INLET FACE

Definition: THE DISTANCE FROM THE CENTERLINE OF THE OUTLET TO THE FACE OF THE INLET.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AZZMJAA4.000*; AZZMJLA101.6*; AZZMJAB3.990$$JAC4.010*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA

APP Key	MRC	Mode Code	Requirements
	AZZN	J	DESICCANT CAPACTIY

Definition: THE AMOUNT OF LIQUID, GRANULES, AND THE LIKE, THE ITEM WILL HOLD.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., AZZNJCP16.000*; AZZNJCA26224.0*)

For items that do not require a rating, change the Mode Code to K and enter Reply Code N. (e.g., AZZNKN*)

REPLY CODE	REPLY (AG67)
CP	CUBIC INCHES
CA	CUBIC MILLIMETERS

DA

	CWMD	J	COMPRESSOR POWER RATING

Definition: THE VALUE OF THE ELECTRICAL INPUT POWER FOR WHICH THE COMPRESSOR IS RATED.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., CWMDJH1.000*; CWMDJL0.746*)

For items that do not require a rating, change the mode code to K and enter Reply Code N. (e.g., CWMDKN*)

REPLY CODE	REPLY (AC33)
H	HORSEPOWER
L	KILOWATTS

DA

	ABHP	J	OVERALL LENGTH

Definition: THE DIMENSION MEASURED ALONG THE LONGITUDINAL AXIS WITH TERMINATED POINTS AT THE EXTREME ENDS OF THE ITEM.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., ABHPJAA8.000*; ABHPJLA203.2*; ABHPJAB7.975$$JAC8.025*)

APP Key	MRC	Mode Code	Requirements

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA*

AEUG D SHELL MATERIAL

Definition: THE ELEMENT, COMPOUND, OR MIXTURE OF WHICH THE SHELL IS FABRICATED.

Reply Instructions: Enter the applicable Reply Code from Appendix A , Table 3. (e.g., AEUGDST0000*; AEUGDAS0000$$DBR0000*; AEUGDAS0000$DBR0000*)

DA*

AFRU D SHELL SURFACE TREATMENT

Definition: CONSISTS OF PLATING, DIP, AND/OR COATING THAT CANNOT BE WIPED OFF. PLATING AND/OR COATING IS ANY CHEMICAL AND/OR METALLIC ADDITIVE, ELECTROCHEMICAL, OR MILD MECHANICAL PROCESS WHICH PROTECTS THE SHELL SURFACE.

Reply Instructions: Enter the applicable Reply Code from Appendix A , Table 4. (e.g., AFRUDPNX000*; AFRUDAN0000$$DPNG000*)

DA*

AMRQ J SHELL LENGTH

Definition: A MEASUREMENT OF THE LONGEST DIMENSION OF THE SHELL, IN DISTINCTION FROM WIDTH.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AMRQJAA5.500*; AMRQJLA139.7*; AMRQJAB5.450$$JAC5.550*)

Table 1

APP Key	MRC	Mode Code	Requirements

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA*

AZZT J SHELL DIAMETER

Definition: THE LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF THE SHELL, AND TERMINATES AT THE CIRCUMFERENCE.

Reply Instructions: Enter the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AZZTJAA1.750*; AZZTJLA44.5*; AZZTJAB1.740$$JAC1.760*)

Table 1

REPLY CODE	REPLY (AA05)
A	INCHES
L	MILLIMETERS

Table 2

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA

AWPR H END CONNECTION TYPE AND LOCATION

Definition: INDICATES THE TYPE OF END CONNECTION AND ITS LOCATION ON THE ITEM.

Reply Instructions: Enter the applicable Reply Codes from Appendix A , Table 5, and the table below. (e.g., AWPRHABAHJ*)

APP Key	MRC	Mode Code	Requirements

To determine whether the connection is pipe or tube see Appendix C, Table 1, 2, 3, 4, 5 or 6. For items of lead or lead alloy, if the inside diameter is less than 1/2 inch, the item is considered to be a tube.To determine which end is the first end, etc., see Appendix C, Table 7 . When ends are of the same type, the largest end will always be considered as the first end. However, when one end has a bulkhead connection, that end will always be considered the first end.

REPLY CODE	REPLY (AJ91)
AHH	BOTH ENDS
AHJ	FIRST END
ALP	SECOND END

NOTE FOR MRCS AWPS, STYL, ACSV, AJES, ABKV, AWME, ACSU, AWMF, ABUJ, AWMG, AWMH, AJYP, AAJD, AAJE, AAJF, CQRB, AJFZ, AHSJ, AWMJ, ABKU, ADML, ADMM, ADMN, ADME, AWMK, AWML, AND AGSX:

FOR THREADED INTERNAL TUBE CONNECTORS REPLY TO MRCS AWPS, STYL, ACSV, ABUJ, AJYP, AAJD, AAJF, CQRB OR AJFZ, AHSJ, AND AWMJ.

FOR UNTHREADED INTERNAL TUBE CONNECTIONS REPLY TO MRCS AWPS, STYL, ACSV, AHSJ, AND AWMJ.

FOR THREADED EXTERNAL TUBE CONNECTIONS REPLY TO MRCS AWPS, STYL, ACSV, ABUJ, AJYP, AAJD, AAJF, CQRB OR AJFZ, AHSJ, AND AWMJ.

FOR UNTHREADED EXTERNAL TUBE CONNECTION REPLY TO MRCS AWPS, STYL, ABKV, AHSJ, AND AWMJ.

FOR THREADED INTERNAL PIPE CONNECTION REPLY TO MRCS AWPS, STYL, ABUJ, AJYP, AAJF, AHSJ, AND AWMJ.

FOR UNTHREADED INTERNAL PIPE CONNECTION REPLY TO MRCS AWPS, STYL, ACSU, AHSJ, AND AWMJ.

FOR THREADED EXTERNAL PIPE CONNECTION REPLY TO MRCS AWPS, STYL, ABUJ, AJYP, AAJF, AHSJ, AND AWMJ.

FOR THREADED EXTERNAL AND INTERNAL PIPE CONNECTION REPLY TO MRCS AWPS, STYL, AWMG, AWMH, AJYP, AAJF, AND AHSJ.

FOR UNTHREADED EXTERNAL PIPE CONNECTION REPLY TO MRCS AWPS, STYL, ACSU, AHSJ, AND AWMJ.

APP Key	MRC	Mode Code	Requirements

FOR RECESSED FLANGE CONNECTION, RAISED FACE FLANGE CONNECTION, OR PLAIN FACE FLANGE CONNECTION, REPLY TO MRCS AWPS, STYL, ACSU, AJES, ACSV, AWMK, ADME, ABKU, ADMN, ADML, ADMM, AWML, AGSX, AHSJ, AND AWMJ, AS INSTRUCTED.

FOR BUTT WELD CONNECTION REPLY TO MRCS AWPS, STYL, ACSU OR ACSV, AHSJ, AND AWMJ.

FOR THREADED INTERNAL HOSE CONNECTION REPLY TO MRCS AWPS, STYL, AWME, ABUJ, AJYP, AAJF, AHSJ, AND AWMJ.

FOR UNTHREADED INTERNAL HOSE CONNECTION REPLY TO MRCS AWPS, STYL, AJES, AWMF, AHSJ, AND AWMJ.

FOR THREADED EXTERNAL HOSE CONNECTION REPLY TO MRCS AWPS, STYL, AWMF, AJES, ABUJ, AJYP, AAJF, AHSJ, AND AWMJ.

FOR UNTHREADED EXTERNAL HOSE CONNECTION REPLY TO MRCS AWPS, STYL, AWME, AHSJ, AND AWMJ.

FOR THREADED INTERNAL OR THREADED EXTERNAL GAS CYLINDER CONNECTION REPLY TO MRCS AWPS, STYL, ABUJ, AJYP, AAJF, AND AWMJ.

FOR THREADED INTERNAL OR THREADED EXTERNAL BOSS CONNECTION REPLY TO MRCS AWPS, STYL, ABUJ, AJYP, AAJD OR AAJE, AAJF, AHSJ, AND AWMJ.

FOR MULTIPLE REPLIES USE SECONDARY ADDRESS CODING FOR EACH MRC AS APPLICABLE, ENTERING IN THE SAME SEQUENCE AS MRC AWPR. FOR ITEMS INDICATING A TOLERANCE, USE AND CODING ($$) AS INSTRUCTED IN THE REQUIREMENT EXAMPLE.

APP Key	MRC	Mode Code	Requirements

DA (See Note Above)*

AWPS D CONNECTION SPECIAL DESIGN

Definition: THE SPECIAL DESIGN OF THE CONNECTION.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the Reply Code from Table 2 below. (e.g.,

AWPS1ADCD)*

Table 1

REPLY CODE	*REPLY (0124)*
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	*REPLY (AB76)*
CD	*BULKHEAD*
BP	*UNION*

DA (See Note Preceding MRC AWPS)*

STYL L STYLE DESIGNATOR

Definition: THE STYLE DESIGNATION INDICATING THE CONFIGURATION THAT MOST NEARLY CORRESPONDS TO THE APPEARANCE OF THE ITEM.

Reply Instructions: Enter the applicable I/SAC from the table below, followed by the applicable style number from Appendix B , Reference Drawing Group B. (e.g., STYL1YL1)*

REPLY CODE	*REPLY (0124)*
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

DA* (See Note Preceding MRC AWPS)

ACSV J TUBE OUTSIDE DIAMETER FOR WHICH DESIGNED

Definition: THE LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF THE TUBE FOR WHICH DESIGNED, AND TERMINATES AT THE OUTSIDE CIRCUMFERENCE.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 2 and 3 below, followed by the numeric value. (e.g., ACSV1AJAA0.500*;

ACSV1BJLA12.7*;

ACSV1YJAB0.495$$JAC0.505*)

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1st end*
1B	*2nd end*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA* (See Note Preceding MRC AWPS)

AJES J HOSE OUTSIDE DIAMETER FOR WHICH DESIGNED

Definition: THE LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF THE HOSE FOR WHICH THE ITEM IS DESIGNED, AND TERMINATES AT THE OUTSIDE CIRCUMFERENCE.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 2 and 3 below, followed by the numeric value. (e.g., AJES1AJAA0.500*;

AJES1BJLA12.7*;

AJES1YJAB0.495$$JAC0.505*)

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA* (See Note Preceding MRC AWPS)

ABKV J OUTSIDE DIAMETER

Definition: THE LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF A CIRCULAR FIGURE OR BODY, AND TERMINATES AT THE OUTSIDE CIRCUMFERENCE.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 2 and 3 below, followed by the numeric value. (e.g., ABKV1AJAA1.250*;

ABKV1BJLA31.8*;

ABKV1YJAB1.240$$JAC1.260*)

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA (See Note Preceding MRC AWPS)*

AWME J NOMINAL HOSE SIZ FOR WHICH DESIGNED

Definition: THE INDUSTRIAL DESIGNATION OR TERM USED TO DEFINE THE DIAMETER OF A HOSE.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Code from Table 2 below, followed by the numeric value. (e.g.,

AWME1AJA0.500;*

AWME1BJL12.7)*

Table 1

REPLY CODE	*REPLY (0124)*
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	*REPLY (AA05)*

A	*INCHES*
L	*MILLIMETERS*

DA (See Note Preceding MRC AWPS)*

ACSU J NOMINAL PIPE SIZE FOR WHICH DESIGNED

Definition: THE INDUSTRIAL DESIGNATION OR TERM USED TO DEFINE THE NOMINAL DIAMETER OF PIPE FOR WHICH THE ITEM IS DESIGNED.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Code from Table 2 below, followed by the numeric value. (e.g.,

ACSU1AA0.375;*

ACSU1BJL9.5)*

Table 1

REPLY CODE	*REPLY (0124)*
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	*REPLY (AA05)*
A	*INCHES*
L	*MILLIMETERS*

DA* (See Note Preceding MRC AWPS)

AWMF J INSIDE DIAMETER HOSE ACCOMMODATED

Definition: THE LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF THE ACCOMMODATION FOR A HOSE, AND TERMINATES AT THE INSIDE CIRCUMFERENCE.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 2 and 3 below, followed by the numeric value. (e.g., AWMF1AJAA0.375;*

AWMF1BJLA9.5;*

AWMF1YJAB0.360$$JAC0.390)*

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*

1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA (See Note Preceding MRC AWPS)*

ABUJ A THREAD SIZE

Definition: DESIGNATES THE THREAD DIAMETER AND NUMBER OF THREADS PER SPECIFIC MEASUREMENT SCALE.

Reply Instructions: Enter the applicable I/SAC from the table below, followed by the size. (e.g.,

ABUJ1AA1/2-20;*

ABUJ1BA3/4-14)*

REPLY CODE	*REPLY (0124)*
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

DA (See Note Preceding MRC AWPS)*

AWMG A ETERNAL THREAD SIZ

Definition: DESIGNATES THE THREAD DIAMETER AND NUMBER OF THREADS PER MEASUREMENT SCALE OF AN EXTERNALLY THREADED ITEM.

Reply Instructions: Enter the applicable I/SAC from the table below, followed by the size. (e.g.,

AWMG1AA7/8-20;*

AWMG1BA1-1/4-18)*

REPLY CODE	REPLY (0124)
1Y	BOTH ENDS
1A	1ST END
1B	2ND END

DA (See Note Preceding MRC AWPS)*

AWMH A INTERNAL THREAD SIZE

Definition: DESIGNATES THE THREAD DIAMETER AND NUMBER OF THREADS PER MEASUREMENT SCALE OF AN INTERNALLY THREADED ITEM.

Reply Instructions: Enter the applicable I/SAC from the table below, followed by the size. (e.g.,

AWMH1AA3/4-20;*

AWMH1BA1/2-20)*

REPLY CODE	REPLY (0124)
1Y	BOTH ENDS
1A	1ST END
1B	2ND END

DA (See Note Preceding MRC AWPS)*

AJYP D SCREW THREAD DESIGNATOR

Definition: A DESIGNATION DISTINGUISHING ONE GROUP OF SCREW THREAD DIAMETER-PITCH COMBINATIONS FROM ANOTHER BY THE NUMBER OF THREADS PER MEASUREMENT SCALE FOR A SPECIFIC DIAMETER.

Reply Instructions: Enter the applicable I/SAC from the table below, followed by the applicable Reply Code from Appendix A , Table 6 . (e.g.,

AJYP1ADNC;*

AJYP1BDNF)*

REPLY CODE	REPLY (0124)
1Y	BOTH ENDS
1A	1ST END
1B	2ND END

DA (See Note Preceding MRC AWPS)*

AAJD A THREAD CLASS

Definition: A NUMERIC-ALPHA DESIGNATOR INDICATING THE PITCH DIAMETER TOLERANCE AND AN EXTERNAL OR INTERNAL THREAD.

Reply Instructions: Enter the applicable I/SAC from the table below, followed by the class. (e.g.,

AAJD1AA3A;*

AAJD1BA3B)*

REPLY CODE	*REPLY (0124)*
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

DA (See Note Preceding MRC AWPS)*

AAJE J THREAD PITCH DIAMETERS

Definition: THE MINIMUM AND MAXIMUM PITCH DIAMETER LIMITS OF A STRAIGHT SCREW THREAD.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Code from Table 2 below, followed by the numeric values. Precede each value with the letter P. (e.g., AAJEJAP0.065/P0.090; AAJE1YJLP1.7/P2.3*;*

AAJE1AJAP0.065/P0.090;*

AAJE1BJAP0.110/P0.135)*

Table 1

REPLY CODE	*REPLY (0124)*
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	*REPLY (AA05)*
A	*INCHES*
L	*MILLIMETERS*

DA (See Note Preceding MRC AWPS)*

AAJF D THREAD DIRECTION

Definition: THE DIRECTION OF THE THREAD WHEN VIEWED AXIALLY. A RIGHT-HAND THREAD WINDS IN A CLOCKWISE DIRECTION WHILE A LEFT-HAND THREAD WINDS IN A COUNTERCLOCKWISE DIRECTION.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Code from Table below. (e.g.,

AAJF1ADL;*

AAJF1BDR)*

Table 1

REPLY CODE	*REPLY (0124)*
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	*REPLY (AA38)*
L	*LEFT-HAND*
R	*RIGHT HAND*

DA* (See Note Preceding MRC AWPS)

CQRB J SEAT ANGLE

Definition: THE ANGLE OF THE END SURFACE UPON WHICH THE MATED SURFACE SEATS.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., CQRBJD45.0*; CQRBJR0.8*;

CQRB1AJD45.0*

CQRB1BJD30.0*)

REPLY CODE	REPLY (AP38)
D	DEGREES
R	RADIANS

DA* (See Note Preceding MRC AWPS)

AJFZ J SEAT RADIUS

Definition: THE RADIUS OF THE END SURFACE UPON WHICH THE MATED SURFACE SEATS.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 2 and 3 below, followed by the numeric value. (e.g., AJFZ1AJAA0.125;*

AJFZ1BJLA3.2;*

AJFZ1YJAB0.120$$JAC0.130)*

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA* (See Note Preceding MRC AWPS)

AHSJ J LEG LENGTH

Definition: A MEASUREMENT OF THE LONGEST DIMENSION OF THE LEG, IN DISTINCTION FROM WIDTH.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 1 and 2 below, followed by the numeric value. (e.g., AHSJ1AJAA1.500;*

AHSJ1BJLA38.1;*

AHSJ1YJAB1.490$$JAC1.510)*

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA* (See Note Preceding MRC AWPS)

AWMJ J RESTRICTION PASSAGE INSIDE DIAMETER

Definition: THE LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF THE RESTRICTION PASSAGE, AND TERMINATES AT THE INSIDE CIRCUMFERENCE.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 2 and 3 below, followed by the numeric value. (e.g., AWMJ1AJAA0.125; AWMJ1BJLA3.2*; AWMJ1YJAB0.120$$JAC0.130*;)*

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA* (See Note Preceding MRC AWPS)

ABKU FLANGE THICKNESS

Definition: A MEASUREMENT OF THE SMALLEST DIMENSION OF A FLANGE, IN DISTINCTION FROM LENGTH OR WIDTH.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 2 and 3 below, followed by the numeric value. (e.g., ABKU1AJAA0.750;*

ABKU1BJLA19.0;*

ABKU1YJAB0.740$$JAC0.760)*

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA (See Note Preceding MRC AWPS)*

ADML A MOUNTING FLANGE BOLT HOLE QUANTITY

Definition: THE NUMBER OF BOLT HOLES IN THE MOUNTING FLANGE.

Reply Instructions: Enter the applicable I/SAC from the table below, followed by the quantity. (e.g.,

ADML1AA4;*

ADML1YA6)*

REPLY CODE	*REPLY (0124)*
1Y	*BOTH ENDS*

1A	*1ST END*
1B	*2ND END*

DA* (See Note Preceding MRC AWPS)

ADMM J MOUNTING FLANGE BOLT HOLE DIAMETER

Definition: THE LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF A MOUNTING FLANGE BOLT HOLE, AND TERMINATES AT THE CIRCUMFERENCE.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 2 and 3 below, followed by the numeric value. (e.g., ADMM1AJAA0.375;*

ADMM1BJLA9.5;*

ADMM1YJAB0.370$$JAC0.380)*

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA* (See Note Preceding MRC AWPS)

ADMN J MOUNTING FLANGE BOLT CIRCLE DIAMETER

Definition: THE LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF A MOUNTING FLANGE BOLT CIRCLE, AND TERMINATES AT THE CIRCUMFERENCE.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 2 and 3 below, followed by the numeric value. (e.g., ADMN1AJAA1.275;*

ADMN1BJLA32.4;*

ADMN1YJAB1.265$$JAC1.285)*

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA* (See Note Preceding MRC AWPS)

ADME J MOUNTING FLANGE OUTSIDE DIAMETER

Definition: THE LENGTH OF A STRAIGHT LINE WHICH PASSES THROUGH THE CENTER OF A MOUNTING FLANGE, AND TERMINATES AT THE OUTSIDE CIRCUMFERENCE.

Reply Instructions: Enter the applicable I/SAC from Table 1and 3 below, followed by the applicable Reply Code (e.g., ADME1AJAA1.500; ADME1BJLA38.1*; ADME1YJAB1.490$$JAC1.510.*)*

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA (See Note Preceding MRC AWPS)*

AWMK D MOUNTING FLANGE SHAPE

Definition: THE PHYSICAL CONFIGURATION OF THE MOUNTING FLANGE.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Code from Table 2 below. (e.g.,

AWMK1ADBT;*

AWMK1YDRD)*

REPLY CODE	*REPLY (0124)*
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

REPLY CODE	*REPLY (AD07)*
BT	*OVAL*
RT	*RECTANGULAR*
RD	*ROUND*
SQ	*SQUARE*
TR	*TRIANGULAR*

DA* (See Note Preceding MRC AWPS)

AWML J OVAL FLANGE BOLT CENTER

Definition: THE DIMENSION OF THE BOLT CENTER ON AN OVAL FLANGE.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 2 and 3 below, followed by the numeric value. (e.g., AWML1AJAA1.250;*

AWML1BJLA31.7;*

AWML1YJAB1.240$$JAC1.260)*

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

DA* (See Note Preceding MRC AWPS)

AGSX J FLANGE OVERALL LENGTH

Definition: THE DIMENSION MEASURED ALONG THE LONGITUDINAL AXIS WITH TERMINATED POINTS AT THE EXTREME ENDS OF A FLANGE.

Reply Instructions: Enter the applicable I/SAC from Table 1 below, followed by the applicable Reply Codes from Tables 2 and 3 below, followed by the numeric value. (e.g., AGSX1AJAA2.250;*

AGSX1BJLA57.1;*

AGSX1YJAB2.235$$JAC2.265)*

For oval flanges, enter the major axis.

Table 1

REPLY CODE	REPLY (0124)
1Y	*BOTH ENDS*
1A	*1ST END*
1B	*2ND END*

Table 2

REPLY CODE	REPLY (AA05)
A	*INCHES*
L	*MILLIMETERS*

Table 3

REPLY CODE	REPLY (AC20)
A	NOMINAL
B	MINIMUM
C	MAXIMUM

NOTE FOR MRCS CBBL AND FEAT: E MODE REPLIES WILL NOT BE ACCEPTABLE IN REPLY TO MRC CBBL. IF A REPLY IS NOT REFLECTED ON THE TABLE FOR MRC CBBL, ENTER THE FEATURES IN REPLY TO MRC FEAT.

DA* (See Note Above)

CBBL D FEATURES PROVIDED

Definition: THOSE FEATURES, NOT OTHERWISE SPECIFIED, WHICH MAY BE REQUIRED FOR PROPER FUNCTIONING OF THE ITEM.

Reply Instructions: Enter the Reply Code from the table below. (e.g., CBBLDAKY*)

REPLY CODE	REPLY (AN47)
AKY	INTEGRAL STRAINER

SECTION: STANDARD

APP
Key MRC Mode Code Requirements

ALL * (See Note Preceding MRC CBBL)

FEAT G SPECIAL FEATURES

Definition: THOSE UNUSUAL OR UNIQUE CHARACTERISTICS OR QUALITIES OF AN ITEM NOT COVERED IN THE OTHER REQUIREMENTS AND WHICH ARE DETERMINED TO BE ESSENTIAL FOR IDENTIFICATION.

Reply Instructions: Enter the reply in clear text. Separate multiple replies with a semicolon. (e.g., FEATGADJUSTABLE NOSE CLIP*; FEATGADJUSTABLE NOSE PIECE; DISPOSABLE*)

ALL *

TEST J TEST DATA DOCUMENT

Definition: THE SPECIFICATION, STANDARD, DRAWING, OR SIMILAR INSTRUMENT THAT SPECIFIES ENVIRONMENTAL AND PERFORMANCE REQUIREMENTS OR TEST CONDITIONS UNDER WHICH AN ITEM IS TESTED AND ESTABLISHES ACCEPTABLE LIMITS WITHIN WHICH THE ITEM MUST CONFORM IDENTIFIED BY AN ALPHABETIC AND/OR NUMERIC REFERENCE NUMBER. INCLUDES THE COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE OF THE ENTITY CONTROLLING THE INSTRUMENT.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the 5-position CAGE Code, a dash, and the document identification number.

(e.g., TESTJA12345-CWX654321*;

TESTJA1234A-654321$$JB5556A-663654*;

TESTJAA2345-654321$JB55566-663654*)

REPLY CODE	REPLY (AC28)
C	DRAWING (This is the basic governing drawing, such as a contractor drawing, original equipment manufacturer drawing, etc.; excludes any specification, standard, or other document that may be referenced in a basic governing drawing)
A	SPECIFICATION (Includes engineering type bulletins, brochures, etc., that reflect specification type data in specification format; excludes commercial catalogs, industry directories, and similar trade publications,

APP Key	MRC	Mode Code	Requirements
			reflecting general type data on certain environmental and performance requirements and test conditions that are shown as "typical," "average," "nominal," etc.)
		B	STANDARD (Includes industry or association standards, individual manufacturer standards, etc.)

ALL *

SPCL G SPECIAL TEST FEATURES

Definition: TEST CONDITIONS AND RATINGS, OR ENVIRONMENTAL AND PERFORMANCE REQUIREMENTS THAT ARE DIFFERENT, MORE CRITICAL, OR MORE SPECIFIC THAN THOSE SPECIFIED IN A GOVERNING TEST DATA DOCUMENT.

Reply Instructions: Enter the reply in clear text. (e.g., SPCLGSELECTED AND TESTED FOR NAVIGATIONAL SYSTEMS*)

ALL*

ZZZK J SPECIFICATION/STANDARD DATA

Definition: THE DOCUMENT DESIGNATOR OF THE SPECIFICATION OR STANDARD WHICH ESTABLISHED THE ITEM OF SUPPLY.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the Commercial and Government Entity (CAGE) Code of the entity controlling the document, a dash, and the document designator. The agency that controls the limited coordination document must be preceded and followed by a slash following the designator. The word canceled or superseded must be preceded and followed by a slash for the designator. Professional and industrial association specifications/standards are differentiated from a manufacturer's specification in that the data has been coordinated and published by the professional and industrial association. Include amendments and revisions where applicable.

(e.g., ZZZKJT81337-30642B*;

ZZZKJS81349-MIL-D-180 REV1/CANCELED/*;

ZZZKJP80205-NAS1103*;

ZZZKJS81349-MIL-C-1140C/CE/*;

ZZZKJT81337-30642B$$JP80205-NAS1103*)

APP Key	MRC	Mode Code	Requirements

REPLY CODE	REPLY (AN62)
S	GOVERNMENT SPECIFICATION
T	GOVERNMENT STANDARD
D	MANUFACTURERS SOURCE CONTROL
R	MANUFACTURERS SPECIFICATION
N	MANUFACTURERS SPECIFICATION CONTROL
M	MANUFACTURERS STANDARD
A	PROFESSIONAL/INDUSTRIAL ASSOCIATION SPECIFICATION
P	PROFESSIONAL/INDUSTRIAL ASSOCIATION STANDARD

NOTE FOR MRC ZZZT: IF THE SPECIFICIATION/STANDARD CITED IN REPLY TO MRC ZZZK IS NONDEFINITIVE, REPLY TO MRC ZZZT. THIS REPLY IS THE DATA WHICH IS NOT RECORDED IN SEGMENT C.

ALL* (See Note Above)

ZZZT J NONDEFINITIVE SPEC/STD DATA

Definition: THE NUMBER, LETTER, OR SYMBOL THAT INDICATES THE TYPE, STYLE, GRADE, CLASS, AND THE LIKE, OF AN ITEM IN A NONIDENTIFYING SPECIFICATION OR STANDARD.

Reply Instructions: Enter the applicable Reply Code from Appendix A , Table 1, followed by the appropriate number, letter, or symbol. (e.g., ZZZTJTY1*; ZZZTJTY1$$JSTA*; ZZZTJTY1$JSTA*)

ALL*

ZZZW G DEPARTURE FROM CITED DOCUMENT

Definition: THE TECHNICAL DIFFERENTIATING CHARACTERISTIC(S) OF AN ITEM OF SUPPLY WHICH DEPART(S) FROM THE TEXT OF A SPECIFICATION OR A STANDARD IN THAT IT REPRESENTS A SELECTION OF CHARACTERISTICS STATED IN THE SPECIFICATION OR STANDARD AS BEING OPTIONAL, OR A VARIATION FROM ONE OR MORE OF THE STATED CHARACTERISTICS, OR AN ADDITIONAL CHARACTERISTIC NOT STATED IN THE SPECIFICATION OR STANDARD.

Reply Instructions: Enter the reply in clear text. (e.g., ZZZWGAS MODIFIED BY MATERIAL*)

APP Key	MRC	Mode Code	Requirements
ALL*			
	ZZZX	G	DEPARTURE FROM CITED DESIGNATOR
			Definition: THE VARIATION WHEN THE ITEM IS IN CONFORMITY WITH A TYPE DESIGNATOR COVERED BY A SPECIFICATION OR STANDARD, EXCEPT IN REGARD TO ONE OR MORE TECHNICAL DIFFERENTIATING CHARACTERISTICS.
			Reply Instructions: Enter the reply in clear text. (e.g., ZZZXGAS MODIFIED BY MATERIAL*)
ALL*			
	ZZZY	G	REFERENCE NUMBER DIFFERENTIATING CHARACTERISTICS
			Definition: A FEATURE OF THE ITEM OF SUPPLY WHICH MUST BE SPECIFICALLY RECORDED WHEN THE REFERENCE NUMBER COVERS A RANGE OF ITEMS.
			Reply Instructions: Enter the reply in clear text. (e.g., ZZZYGCOLOR CODED LEADS*; ZZZYGAS DIFFERENTIATED BY MATERIAL*)
ALL *			
	CRTL	A	CRITICALITY CODE JUSTIFICATION
			Definition: THE MASTER REQUIREMENT CODES OF THOSE REQUIREMENTS WHICH ARE TECHNICALLY CRITICAL BY REASON OF TOLERANCE, FIT, PERFORMANCE, OR OTHER CHARACTERISTICS WHICH AFFECT IDENTIFICATION OF THE ITEM.
			Reply Instructions: Enter the Master Requirement Code for the requirement, the reply to which renders the item as being critical. (e.g., CRTLAMATL*; CRTLAMATL$$ASURF*)
			Reply to this requirement only if the header record for the item identification for the item being identified has been coded as critical.
NOTE FOR MRC PRPY: IF DOCUMENT AVAILABILITY CODE B, D, F, OR H, REPLY TO MRC PRPY.			
ALL * (See Note Above)			

APP Key	MRC	Mode Code	Requirements
	PRPY	A	PROPRIETARY CHARACTERISTICS

Definition: IDENTIFICATION OF THOSE CHARACTERISTICS INCLUDED IN THE DESCRIPTION FOR WHICH A NON-GOVERNMENT ACTIVITY HAS IDENTIFIED ALL OR SELECTED CHARACTERISTICS OF THE ITEM AS BEING PROPRIETARY AND THEREFORE RESTRICTED FROM RELEASE OUTSIDE THE GOVERNMENT WITHOUT PRIOR PERMISSION OF THE ORIGINATOR OF THE DATA.

Reply Instructions: Enter the MRC codes of the individual characteristics of the description which are marked proprietary on the technical data, using AND coding ($$) for multiple characteristics. If all the MRCs are proprietary, enter the reply PACS. If none of the MRCs is proprietary, enter the reply NPAC. (e.g., PRPYAPACS*; PRPYANPAC*; PRPYAMATL$$ASURF*)

ALL *

	ELRN	G	EXTRA LONG REFERENCE NUMBER

Definition: A REFERENCE NUMBER EXCEEDING 32 POSITIONS.

Reply Instructions: Enter the entire reference number. Do not include the 5-position Commercial and Government Entity (CAGE) Code. (e.g., ELRNGANN112036BIL060557LEN0313605UZ062365*)

In determining quantity of characters in the reference number, count will be made after modification in accordance with Volume 2, Chapter 9, FLIS Procedures Manual, DoD 4100.39-M.

ALL *

	ELCD	D	EXTRA LONG CHARACTERISTIC DESCRIPTION

Definition: A DESCRIPTION THAT EXCEEDS 5000 CHARACTERS.

Reply Instructions: Enter the Reply Code from the table below. (e.g., ELCDDA*)

REPLY CODE	REPLY (AN58)
A	ADDITIONAL DESCRIPTIVE DATA ON MANUAL RECORD

SECTION: SUPPTECH

APP Key	MRC	Mode Code	Requirements
ALL			
	AFJK	J	CUBIC MEASURE

Definition: A MEASUREMENT OF VOLUME TAKEN BY MULTIPLYING THE LENGTH BY THE WIDTH BY THE HEIGHT OF AN ITEM AND RENDERED IN CUBIC UNITS.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., AFJKJB8.000*; AFJKJC13112.0*)

REPLY CODE	REPLY (AD42)
C	CUBIC CENTIMETERS
B	CUBIC INCHES

ALL

ALCD	G	USAGE DESIGN

Definition: INDICATES THE DESIGNED USE OF THE ITEM.

Reply Instructions: Enter the reply in clear text. (e.g., ALCDGFOR VEHICULAR USE*)

ALL

AWJN	J	UNPACKAGED UNIT WEIGHT

Definition: THE MEASURED WEIGHT OF AN ITEM UNENCUMBERED BY PACKAGING OR PACKING MATERIAL.

Reply Instructions: Enter the applicable Reply Code from the table below, followed by the numeric value. (e.g., AWJNJAS1.500*; AWJNJAJ6.80*)

REPLY CODE	REPLY (AG67)
BA	GRAMS
AJ	KILOGRAMS
AS	POUNDS

ALL

APP Key	MRC	Mode Code	Requirements
	SUPP	G	SUPPLEMENTARY FEATURES

Definition: CHARACTERISTICS OR QUALITIES OF AN ITEM, NOT COVERED IN ANY OTHER REQUIREMENT, WHICH ARE CONSIDERED ESSENTIAL INFORMATION FOR ONE OR MORE FUNCTIONS EXCLUDING NSN ASSIGNMENT.

Reply Instructions: Enter the reply in clear text. (e.g., SUPPGMAY INCL HOLE IN UPPER SUPPORT FOR MTG DURING SHIPMENT*)

ALL

	ZZZV	G	FSC APPLICATION DATA

Definition: THE JUSTIFICATION FOR THE ASSIGNMENT OF A FEDERAL SUPPLY CLASS (FSC) TO AN ITEM BASED ON THE CLASSIFICATION OF THE NEXT HIGHER CLASSIFIABLE ASSEMBLY.

Reply Instructions: Enter the name of the next higher classifiable assembly in clear text. (e.g., ZZZVGBEARINGS, ANTIFRICTION, UNMOUNTED*)

ALL

	AGAV	G	END ITEM IDENTIFICATION

Definition: THE NATIONAL STOCK NUMBER OR THE IDENTIFICATION INFORMATION OF THE END EQUIPMENT FOR WHICH THE ITEM IS A PART.

Reply Instructions: Enter the reply in clear text.

(e.g., AGAVG3930-00-000-0000*;

(AGAVGFORKLIFT TRUCK, SMITH CORPORATION, MODEL 12, TYPE A*)

[Blank Page]

Reply Tables

Table 1 - NONDEFINITIVE SPEC/STD DATA

NONDEFINITIVE SPEC/STD DATA

REPLY CODE	REPLY (AD08)
AL	ALLOY
AN	ANNEX
AP	APPENDIX
AC	APPLICABILITY CLASS
AR	ARRANGEMENT
AS	ASSEMBLY
AB	ASSORTMENT
BX	BOX
CY	CAPACITY
CA	CASE
CT	CATEGORY
CL	CLASS
CE	CODE
CR	COLOR
CC	COMBINATION CODE
CN	COMPONENT
CP	COMPOSITION
CM	COMPOUND
CD	CONDITION
CS	CONSTRUCTION
DE	DESIGN
DG	DESIGNATOR
DW	DRAWING NUMBER
EG	EDGE
EN	END
FY	FAMILY
FG	FIGURE
FN	FINISH
FM	FORM
FA	FORMULA
GR	GRADE
GP	GROUP
NS	INSERT
TM	ITEM
KD	KIND
KT	KIT
LG	LENGTH
LT	LIMIT
MK	MARK
ML	MATERIAL
MH	MESH
ME	METHOD
MD	MODEL

REPLY CODE	REPLY (AD08)
MT	MOUNTING
NR	NUMBER
PT	PART
PN	PATTERN
PC	PHYSICAL CONDITION
PS	PIECE
PL	PLAN
PR	POINT
QA	QUALITY
RN	RANGE
RT	RATING
RF	REFERENCE NUMBER
SC	SCHEDULE
SB	SECTION
SL	SELECTION
SE	SERIES
SV	SERVICE
SX	SET
SA	SHADE
SH	SHAPE
SG	SHEET
SZ	SIZE
PZ	SPECIES
SQ	SPECIFICATION SHEET
SD	SPEED
ST	STYLE
SS	SUBCLASS
SF	SUBFORM
SP	SUBTYPE
SN	SURFACE CONDITION
SY	SYMBOL
SM	SYSTEM
TB	TABLE
TN	TANNAGE
TP	TEMPER
TX	TEXTURE
TK	THICKNESS
TT	TREATMENT
TR	TRIM
TY	TYPE
YN	UNIT
VA	VARIETY
WT	WEIGHT
WD	WIDTH

Table 2 - DESICCANT TYPES

DESICCANT TYPES

REPLY CODE	REPLY (AL79)
AAM	ALKALI METAL
AAN	ALUMINA, ACTIVATED (includes Aluminum Oxide)
AAP	ANHYDROUS CALCIUM SULPHATE
A	ANY ACCEPTABLE
AAQ	CALCIUM CHLORIDE
AAR	CALCIUM SULPHATE
AAS	CARBON, ACTIVATED
ABL	CHARCOAL, ACTIVATED
AAY	MOLDED CHARCOAL
AAT	MOLECULAR SIEVE
AAW	SILICA GEL
AAX	SODA LIME

Table 3 - MATERIALS

MATERIALS

REPLY CODE	REPLY (AD09)
ALC000	ALUMINUM
AL0000	ALUMINUM ALLOY
A	ANY ACCEPTABLE
AS0000	ASBESTOS
BR0000	BRASS
BRZ000	BRASS, RED
BRAB00	BRASS WIRE MESH
BN0000	BRONZE
BNT000	BRONZE MESH
BNW000	BRONZE, POWDERED
BNE000	BRONZE, SINTERED
DF0000	CLOTH
CU0000	COPPER
CC0000	COTTON
CCQ000	COTTON BATTING
FT0000	FELT
FTA000	FELT, WOOL
FG0000	FIBERGLASS
GS0000	GLASS
MG0000	MAGNESIUM
MEAC00	METAL, POROUS
NC0000	NICKEL COPPER ALLOY (Monel)
PF0000	PAPER
PZ0000	PHOSPHOR BRONZE
PC0000	PLASTIC
PCAAN0	PLASTIC, ACRYLIC RESIN MOULDING POWDER (Lucite)
PCG000	PLASTIC, CELLULOSE ACETATE BUTYRATE

REPLY CODE	REPLY (AD09)
PL0000	POLYAMIDE NYLON
ST0000	STEEL
STB000	STEEL, CORROSION RESISTING
ABAJ00	STEEL WOOL
SN0000	TIN
WL0000	WOOL
WLG000	WOOL, BRONZE
WLD000	WOOL, GLASS

Table 4 - SURFACE TREATMENTS

SURFACE TREATMENTS

REPLY CODE	REPLY (AD09)
AN0000	ANODIZED
A	ANY ACCEPTABLE
BBN000	BLACK, WRINKLE FINISH
	Black Wrinkle (use Reply Code BBN000)
	Bright Clear Lacquer (use Reply Code LQH000)
CDR000	CADMIUM PLATED
EN0000	ENAMEL
LQ0000	LACQUER
LQG000	LACQUER, BLUE
LQH000	LACQUER, CLEAR
LQS000	LACQUER, DULL
PNG000	PAINT
PNX000	PAINT, ACRYLIC
PNW000	PAINT, GRAY
PNY000	PAINT, VINYL
PN0000	PAINTED
PC0000	PLASTIC
WAF000	WAXED
ZNA000	ZINC CHROMATE

Table 5 - END CONNECTION TYPES

END CONNECTION TYPES

REPLY CODE	REPLY (AB76)
AN	BUTT WELD
AM	PLAIN FACE FLANGE
AL	RAISED FACE FLANGE
AK	RECESSED FLANGE
AW	THREADED EXTERNAL BOSS
AU	THREADED EXTERNAL GAS CYLINDER
AR	THREADED EXTERNAL HOSE
AG	THREADED EXTERNAL PIPE
AC	THREADED EXTERNAL TUBE

REPLY CODE	REPLY (AB76)
AV	THREADED INTERNAL BOSS
AT	THREADED INTERNAL GAS CYLINDER
AP	THREADED INTERNAL HOSE
AE	THREADED INTERNAL PIPE
AA	THREADED INTERNAL TUBE
AS	UNTHREADED EXTERNAL HOSE
AJ	UNTHREADED EXTERNAL PIPE
AD	UNTHREADED EXTERNAL TUBE
AQ	UNTHREADED INTERNAL HOSE
AF	UNTHREADED INTERNAL PIPE
AB	UNTHREADED INTERNAL TUBE

Table 6 - THREAD SERIES
THREAD SERIES

REPLY CODE	REPLY (AH06)
AM	ACME
AC	ACME C
AG	ACME G
AN	ANPT
BA	BA
BF	BSF
BE	BSP.F EXT
BT	BSP.F INT
BL	BSP.PL EXT
BN	BSP.PL INT
BS	BSP.TR EXT
BR	BSP.TR INT
BW	BSW
TT	BUTTRESS
CT	CUTTING
DR	DRIVE
FP	F-PTF
FM	FORMING
SM	ISO M (SI other than coarse)
SS	ISO S (SI coarse)
NG	NGO
GS	NGS
GT	NGT
NH	NH
	Nonstandard (use Reply Code NS)
SP	NPS
SC	NPSC
SF	NPSF
SH	NPSH
PS	NPSI
SL	NPSL

REPLY CODE	REPLY (AH06)
PM	NPSM
NP	NPT
NT	NPTF
TR	NPTR
TS	NPTS
PT	PTF-SAE SHORT
PP	PTF-SPL
PE	PTF-SPL EXTRA SHORT
PF	PTF-SPL SHORT
SW	SAE
SG	SGT
SQ	SQUARE
SA	STUB ACME
UN	UN (8, 12, and 16 pitch)
NC	UNC
NE	UNEF
NF	UNF
NJ	UNJ (8, 12, and 16 pitch)
JC	UNJC
JE	UNJEF
JF	UNJF
NM	UNM
NS	UNS (National Special)
WW	WHITWORTH
WD	WOOD

Reference Drawing Groups

REFERENCE DRAWING GROUP A Tables
LAMP BASE STYLES

Note: For styles 7, 14, 16, 21, 22, 23, 24, 25, and 49, to determine whether the item being described is considered candelabra, miniature, medium, mogul, etc., check the folowing index of dimensions:

STYLE	STYLE TITLE	LARGEST DIAMETER
7A	SINGLE CONTACT BAYONET	19/32
7B	MINIATURE BAYONET	23/64
14A	SINGLE PIN T-5	5/8
14B	SINGLE PIN T-6	3/4
14C	SINGLE PIN T-8	1.0
14D	SINGLE PIN T-12	1-1/2

STYLE	STYLE TITLE	DISTANCE BETWEEN PINS	LARGEST DIAMETER
16A	MINIATURE BIPIN	3/16	5/8
16B	MEDIUM BIPIN T-8	1/2	1
16C	MEDIUM BIPIN T-12	1/2	1-1/2
16D	MOGUL BIPIN	13/16	2-1/8
21A	THREE CONTACT MEDIUM SCREW		1
21B	THREE CONTACT MOGUL SCREW		1-1/2
22A	MINIATURE SCREW		3/8
22B	CANDELABRA SCREW		1/2
22C	INTERMEDIATE SCREW		21/32
22D	MEDIUM SCREW		1
22E	ADMEDIUM SCREW		1-1/8
22F	MOGUL SCREW		1-1/2

STYLE	STYLE TITLE	DIAMETR ABOVE FLANGE
23A	MEDIUM PREFOCUS	1
23B	MOGUL PREFOCUS	1-1/2

STYLE	STYLE TITLE	SCREW LARGEST DIAMETER	LARGEST DIAMETER
24A	CANDELABRA SCREW	1/2	21/32
24B	MEDIUM SCREW SHORTER	1	1-9/16

24C	ADMEDIUM SCREW	1-1/8	1-9/16

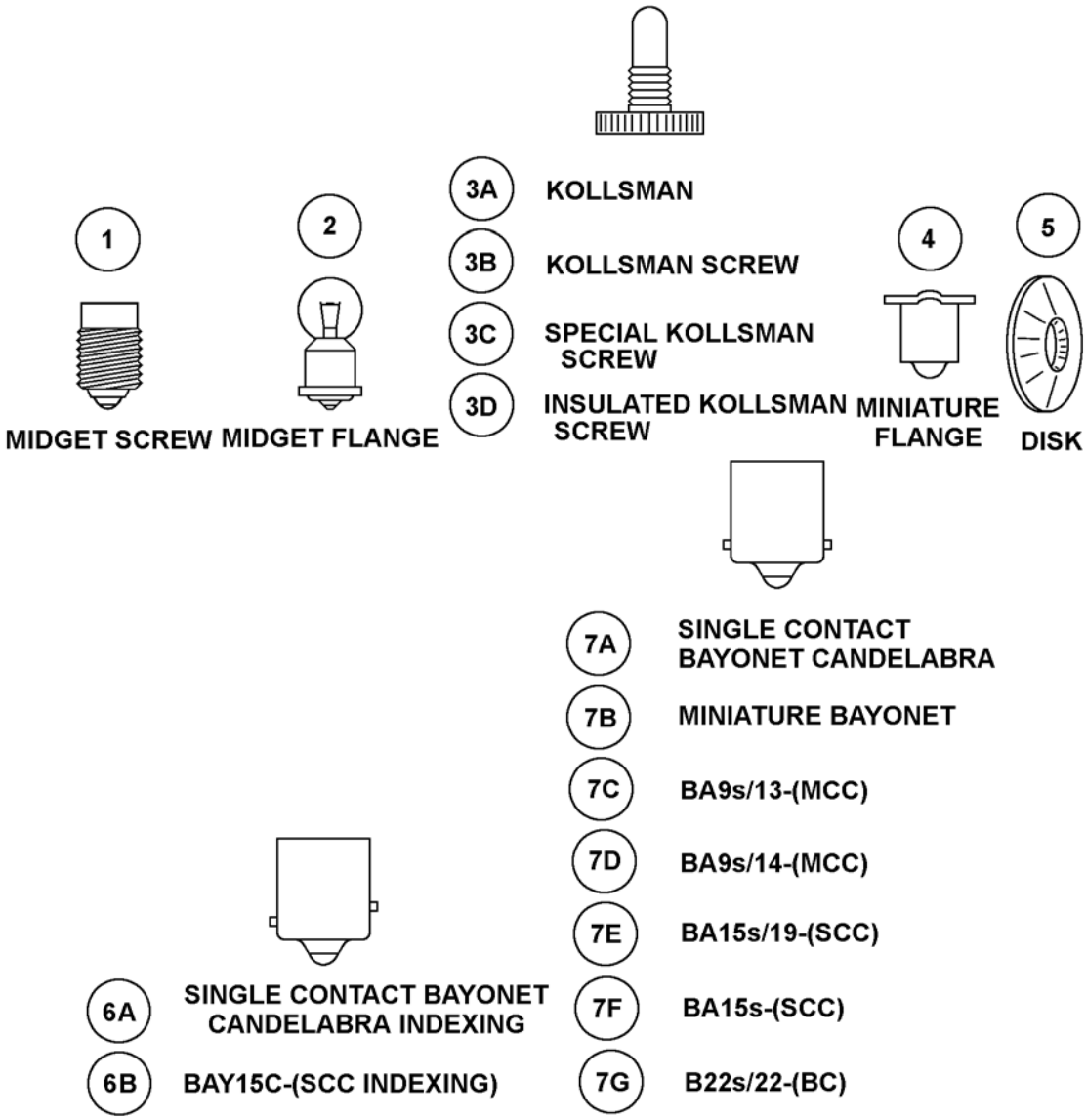
STYLE	STYLE TITLE		LARGEST DIAMETER
25A	SINGLE CONTACT		19/32
25B	MINIATURE PINLESS		33/64

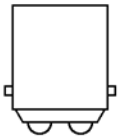
STYLE	STYLE TITLE	DISTANCE BETWEEN	OVERALL DIAMETER
49A	MINIATURE 2 PIN	11/64	5/16

REFERENCE DRAWING GROUP A

LAMP BASE STYLES

(No Requirements)



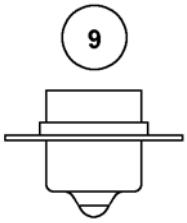


8A DOUBLE CONTACT BAYONET CANDELABRA

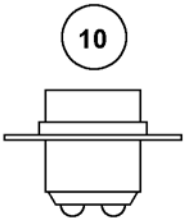
8B B15d/19-(SCC)

8C BA15d/-(SCC)

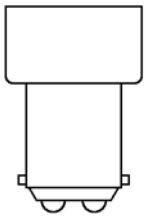
8D B22d/22-(BC)



9 SINGLE CONTACT CANDELABRA PREFOCUS



10 DOUBLE CONTACT CANDELABRA PREFOCUS



11A DOUBLE CONTACT BAYONET CANDELABRA SKIRTED

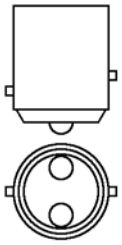
11B B15d/24x17-(SBC SKIRTED)

11C B15d/27x22-(SBC SKIRTED)

11D B15d/29x26-(SBC SKIRTED)

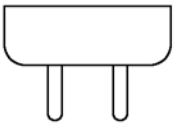
11E B22d/25x26-(BC SKIRTED)

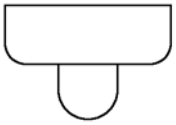
12 SLIDE



13A DOUBLE CONTACT BAYONET CANDELABRA INDEXING

13B BAY15d-(SBC INDEXING)



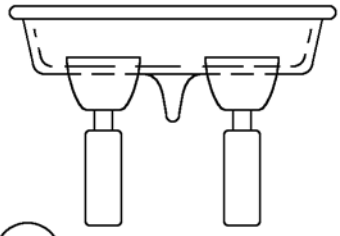


14A SINGLE PIN T-5

14B SINGLE PIN T-6

14C SINGLE PIN T-8

14D SINGLE PIN T-12



15A MEDIUM BIPOST

15B G22

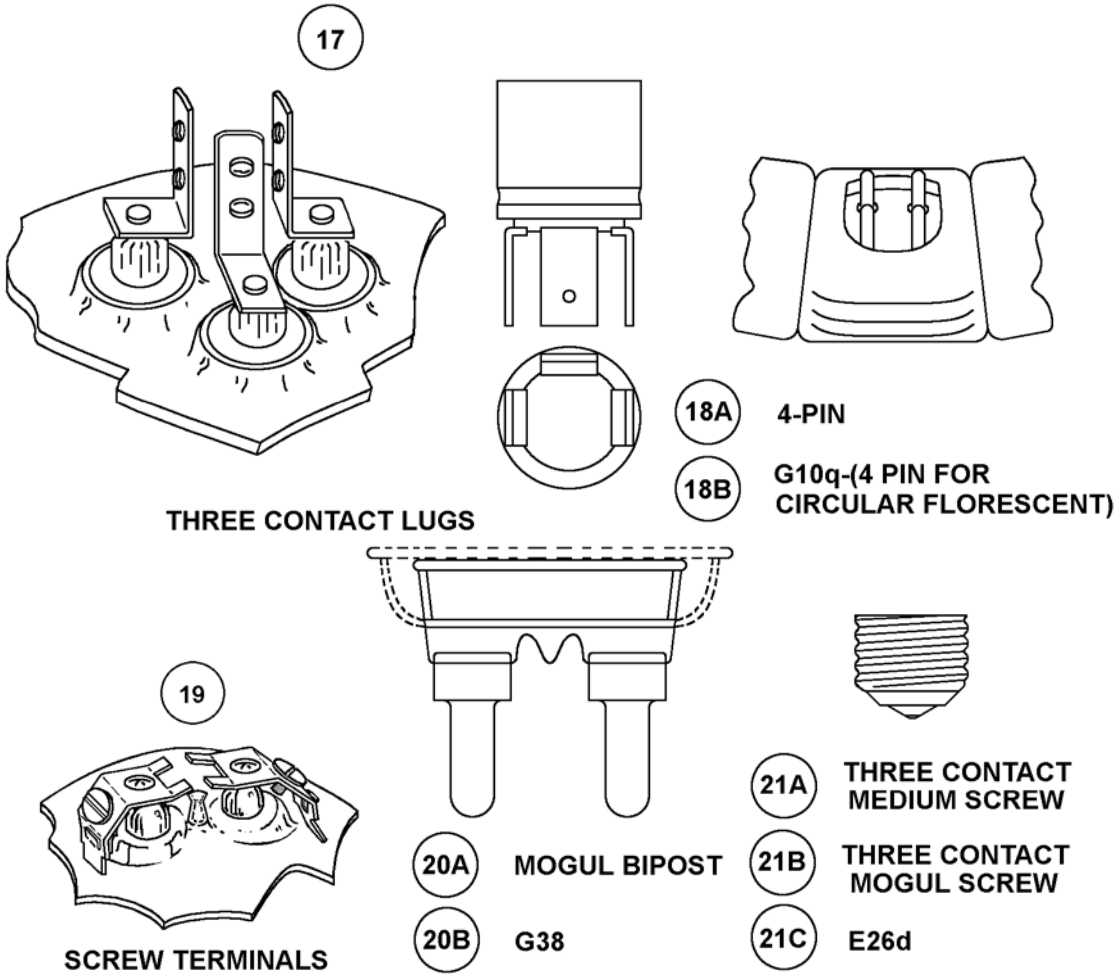
16A MINIATURE BIPIN

16B MEDIUM BIPIN T-8

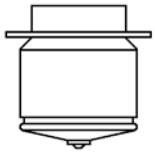
16C MEDIUM BIPIN T-12

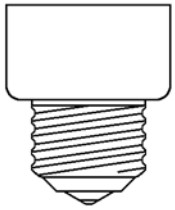
16D MOGUL BIPIN

16E G19 BIPIN


17
THREE CONTACT LUGS
18A
4-PIN
18B
G10q-(4 PIN FOR CIRCULAR FLORESCENT)
19
SCREW TERMINALS
20A
MOGUL BIPOST
20B
G38
21A
THREE CONTACT MEDIUM SCREW
21B
THREE CONTACT MOGUL SCREW
21C
E26d

22A MINIATURE SCREW	22K E12/15	
22B CANDELABRA SCREW	22L E14/20-(SES)	
22C INTERMEDIATE SCREW	22M E17/20	
22D MEDIUM SCREW	22N E26/24	23A MEDIUM PREFOCUS
22E ADMEDIUM SCREW	22P E27/25-(SES)	23B MOGUL PREFOCUS
22F MOGUL SCREW	22Q E27/27-(ES)	23C P38s/24-(MEDIUM PREFOCUS)
22G E5/9-(LES)	22R E39/41	23D P40s/41-(LARGE PREFOCUS)
22H E10/12	22S E40/41-(GES)	23E P28s/33-MEDIUM PREFOCUS)
22J E10/13-(MES)	22T E40/45-(GES)	23F P40s/55-(LARGE PREFOCUS)





24A CANDELABRA

24B MEDIUM SCREW SKIRTED

24C ADMEDIUM SCREW SKIRTED

24D E12/20X15

24E E5/15X6-(LES SKIRTED)

24F E10/A9-13-(WES SKIRTED)

24G EP10/14X11-(PREFOCUS WES)

24H E14/23X15-(SES SKIRTED)

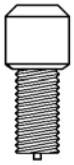
24J E14/25X17-(SES SKIRTED)

24K E27/15X39-(ES SKIRTED)

25A SINGLE CONTACT CANDELABRA PINLESS

25B MINIATURE PINLESS

26



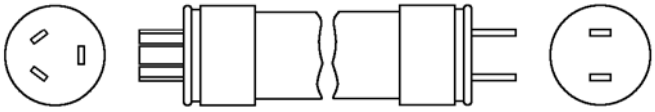
SPECIAL GUNSIGHT SCREW

27A SPECIAL 952

27B SPECIAL 953 SCREW

28A

28B

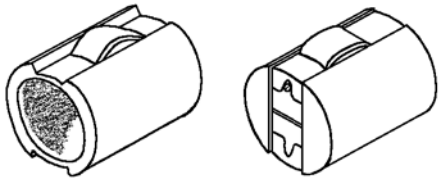


3 PRONG

2 PRONG

30

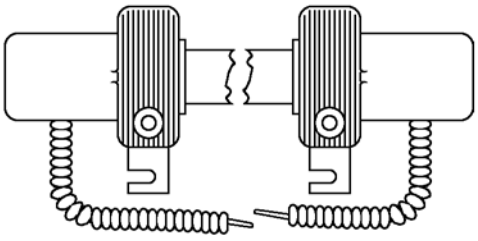
29



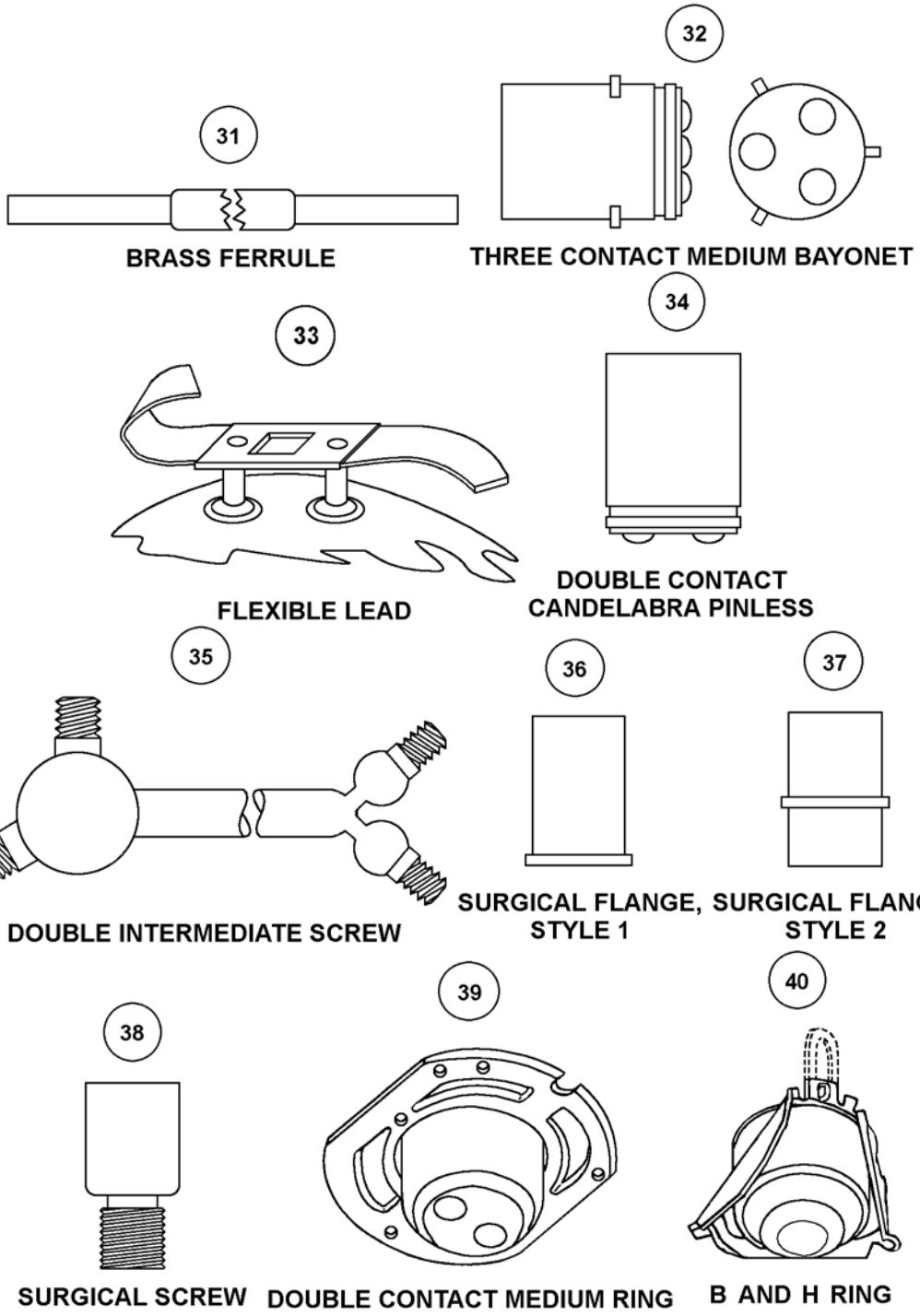
TOP

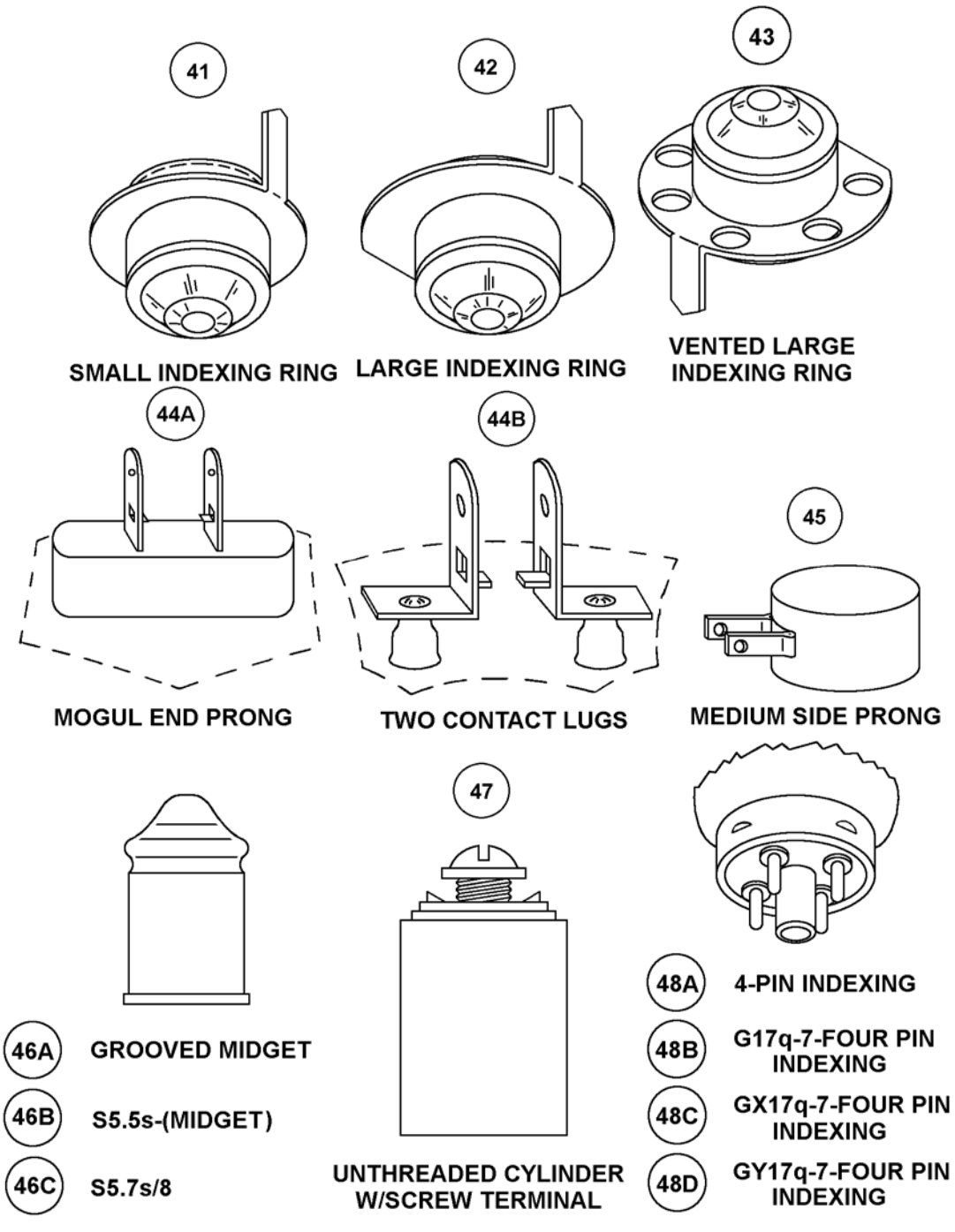
BOTTOM

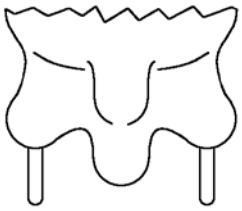
SPECIAL INSTRUMENT SLIDE



MOUNTING LUGS AND BEADED WIRE LEADS

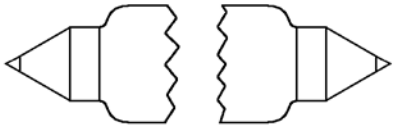

31
BRASS FERRULE
32
THREE CONTACT MEDIUM BAYONET
33
FLEXIBLE LEAD
34
DOUBLE CONTACT
CANDELABRA PINLESS
35
DOUBLE INTERMEDIATE SCREW
36
SURGICAL FLANGE,
STYLE 1
37
SURGICAL FLANGE,
STYLE 2
38
SURGICAL SCREW
39
DOUBLE CONTACT MEDIUM RING
40
B AND H RING


41
42
43
SMALL INDEXING RING
LARGE INDEXING RING
VENTED LARGE INDEXING RING
44A
44B
45
MOGUL END PRONG
TWO CONTACT LUGS
MEDIUM SIDE PRONG
47
46A GROOVED MIDGET
46B S5.5s-(MIDGET)
46C S5.7s/8
UNTHREADED CYLINDER W/SCREW TERMINAL
48A 4-PIN INDEXING
48B G17q-7-FOUR PIN INDEXING
48C GX17q-7-FOUR PIN INDEXING
48D GY17q-7-FOUR PIN INDEXING



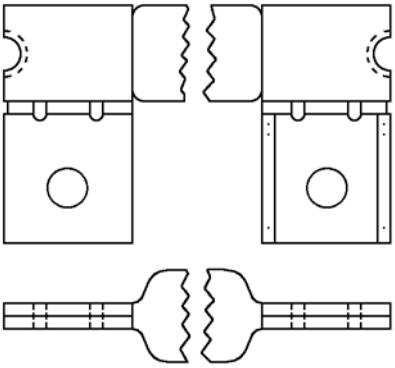
49A	MINIATURE 2 PIN	49H	GX6.35-20
49B	G4	49J	GX6.35-25
49C	G6.35-15	49K	GX6.35-30
49D	G6.35-20	49L	GY6.35-15
49E	G6.35-25	49M	GY6.35-20
49F	G6.35-30	49N	GY6.35-25
49G	GX6.35-15	49P	GY6.35-30

50



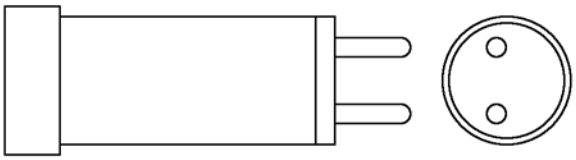
BRASS FERRULE,
STYLE 2

52

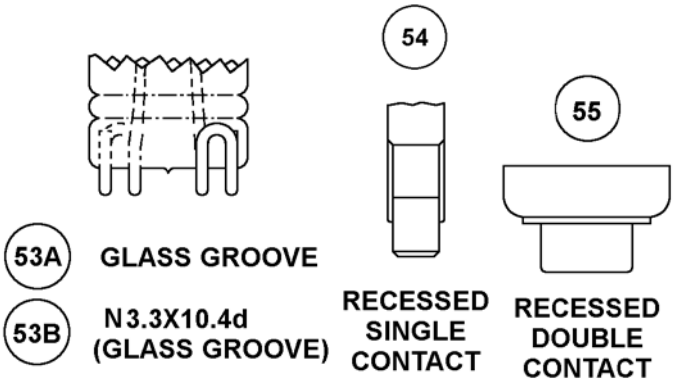


TAB

51



POLARIZED SUBMINIATURE BIPIN

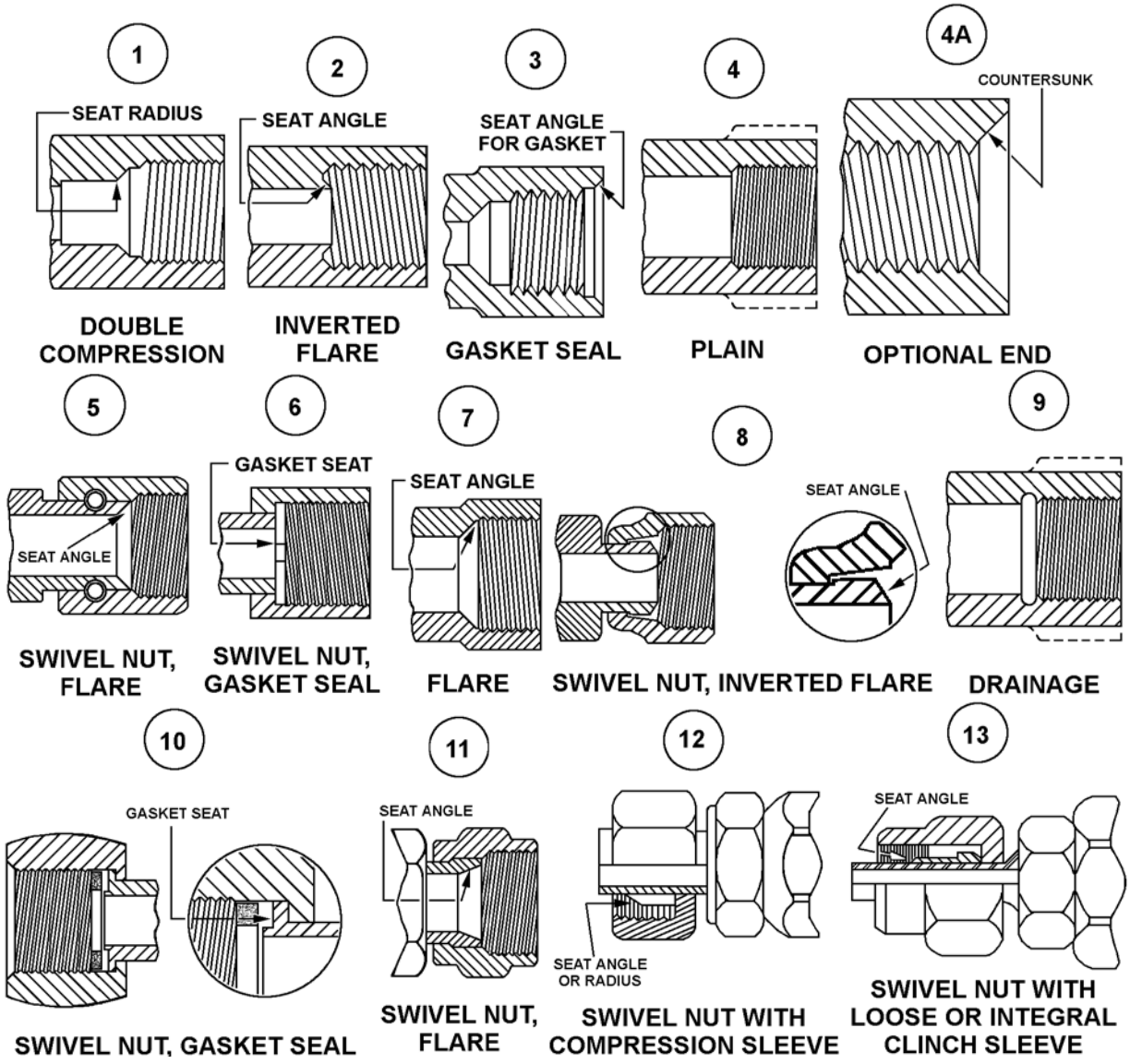

54
55
53A
GLASS GROOVE
53B
N3.3X10.4d
(GLASS GROOVE)
RECESSED
SINGLE
CONTACT
RECESSED
DOUBLE
CONTACT

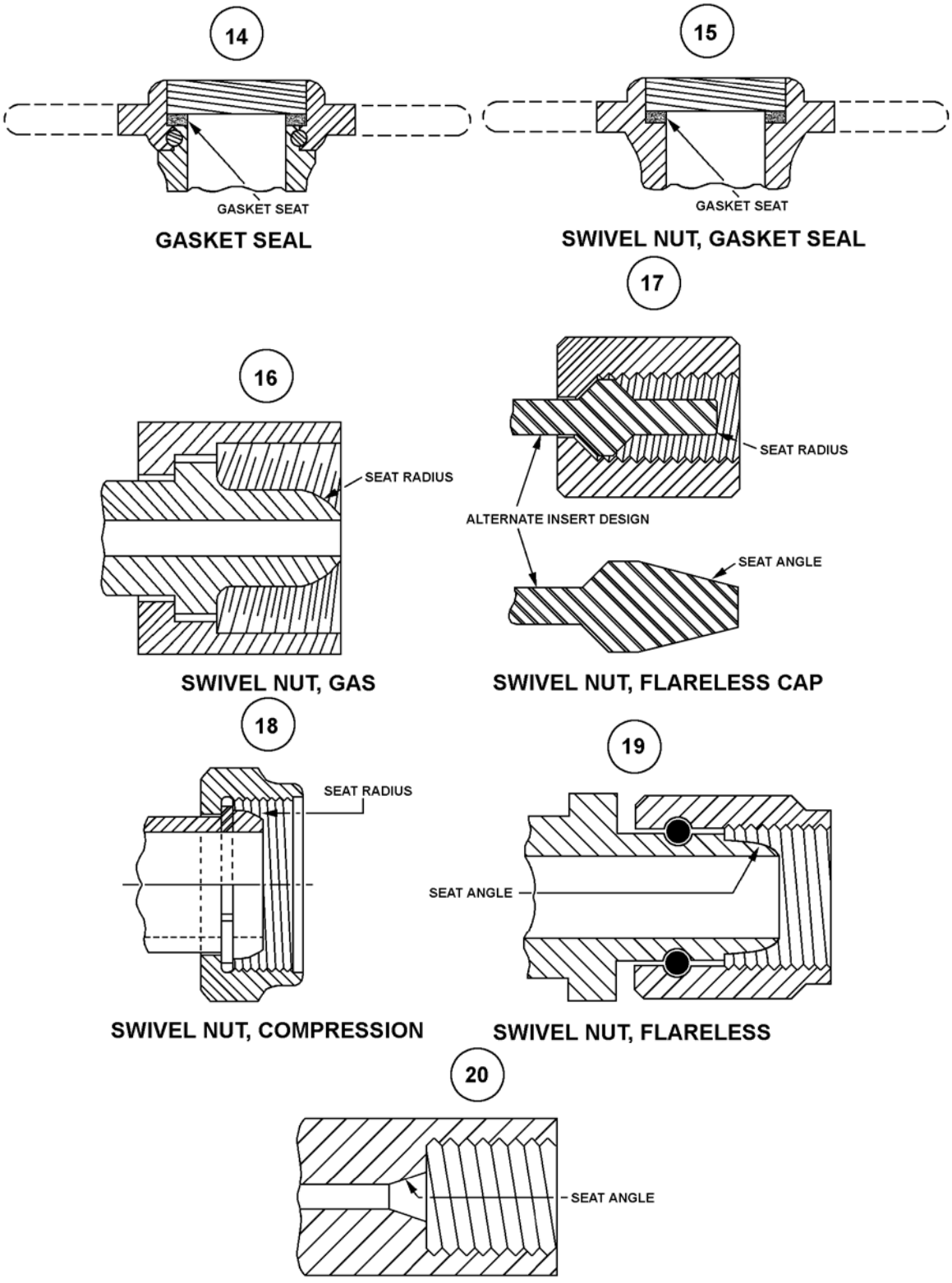
REFERENCE DRAWING GROUP B

END CONNECTION STYLES

THREADED INTERNAL

(No Requirements)

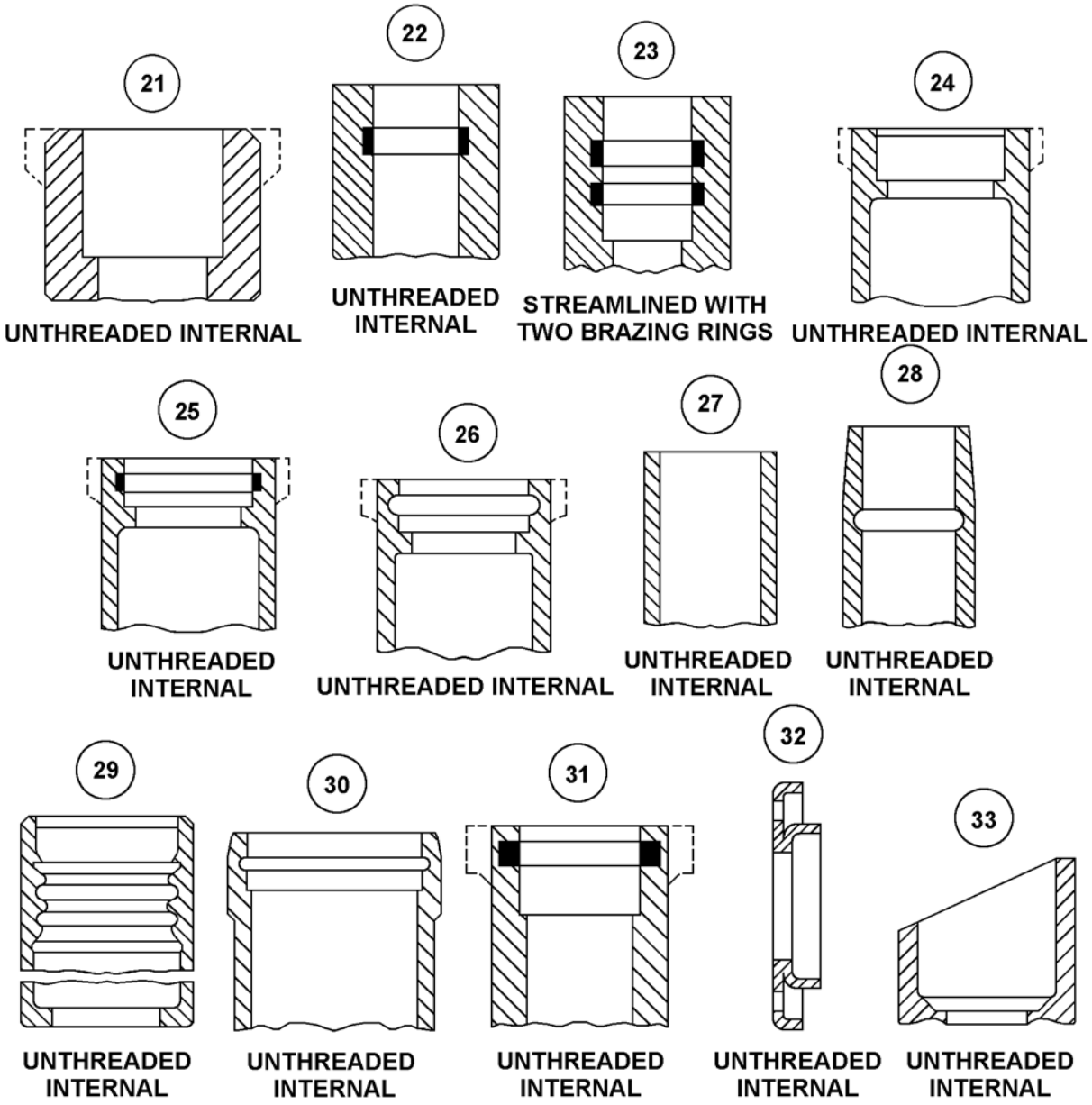


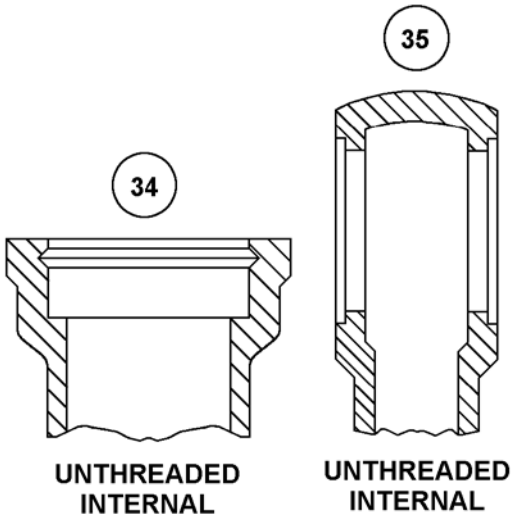


END CONNECTION STYLES

UNTHREADED INTERNAL

(No Requirements)





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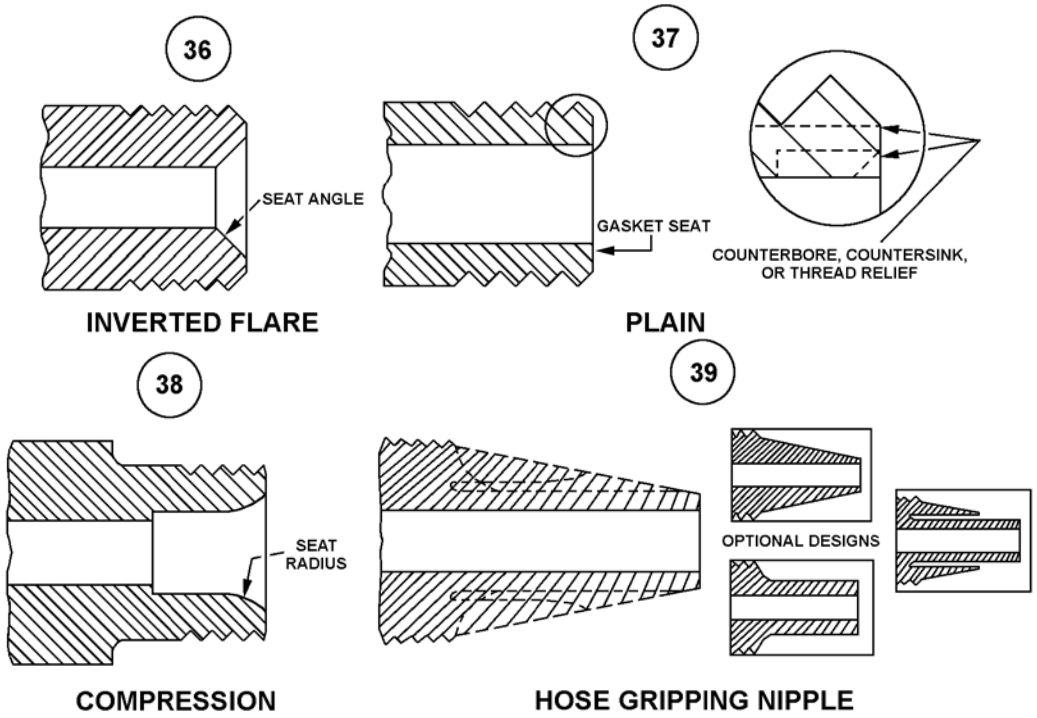
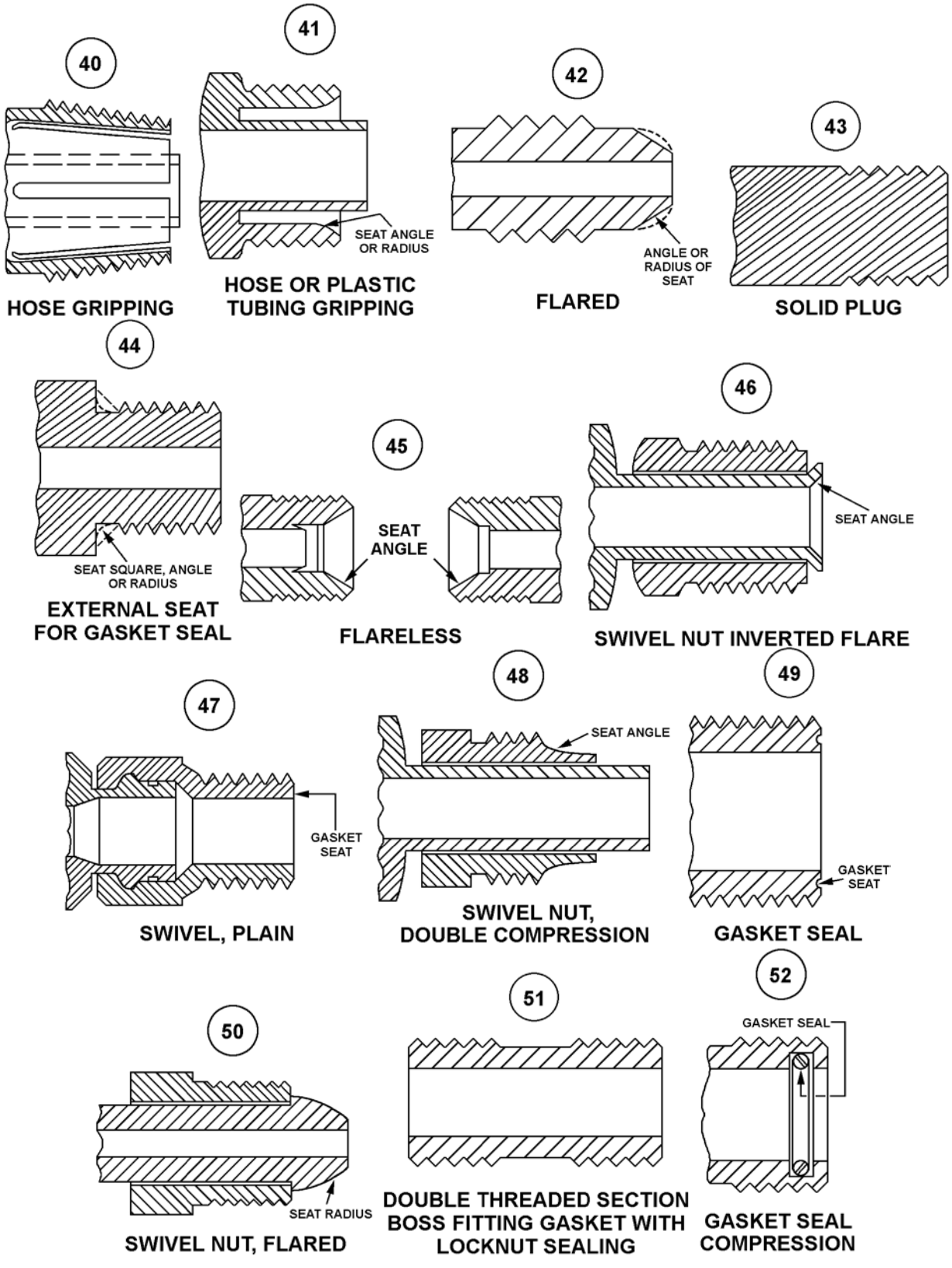
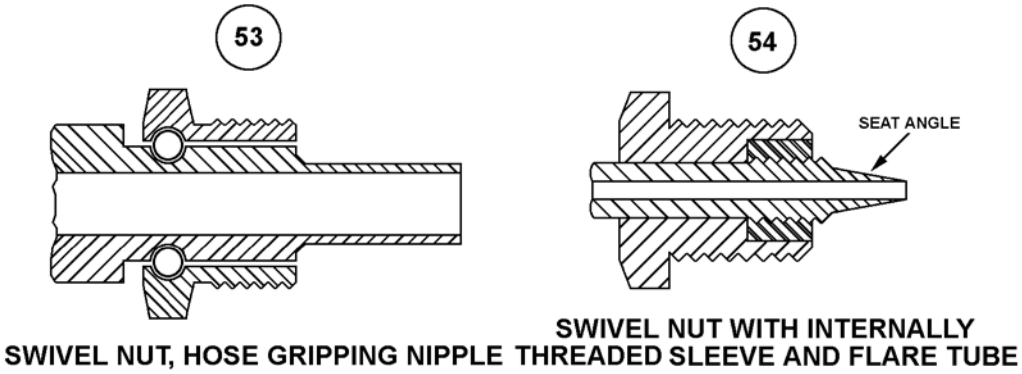
THREADED EXTERNAL

(No Requirements)



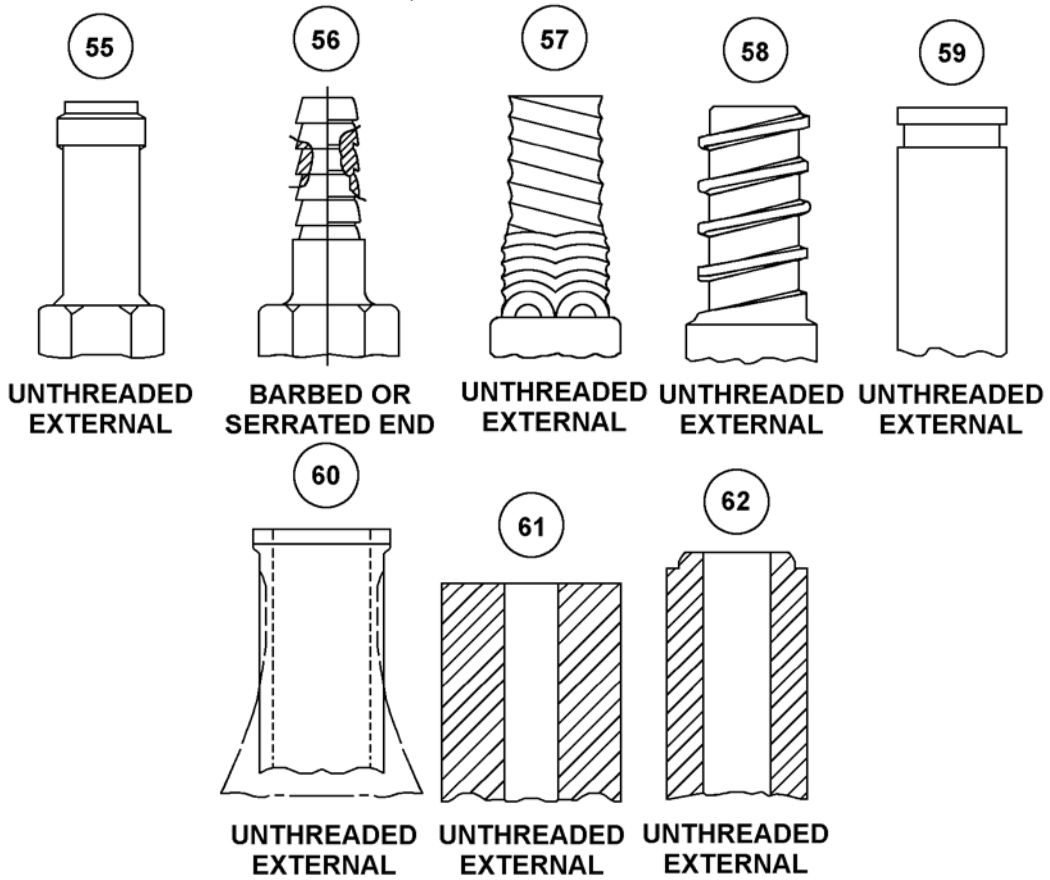

40
HOSE GRIPPING
41
SEAT ANGLE OR RADIUS
HOSE OR PLASTIC TUBING GRIPPING
42
ANGLE OR RADIUS OF SEAT
FLARED
43
SOLID PLUG
44
SEAT SQUARE, ANGLE OR RADIUS
EXTERNAL SEAT FOR GASKET SEAL
45
SEAT ANGLE
FLARELESS
46
SEAT ANGLE
SWIVEL NUT INVERTED FLARE
47
GASKET SEAT
SWIVEL, PLAIN
48
SEAT ANGLE
SWIVEL NUT, DOUBLE COMPRESSION
49
GASKET SEAT
GASKET SEAL
50
SEAT RADIUS
SWIVEL NUT, FLARED
51
DOUBLE THREADED SECTION BOSS FITTING GASKET WITH LOCKNUT SEALING
52
GASKET SEAL
GASKET SEAL COMPRESSION



END CONNECTION STYLES

UNTHREADED EXTERNAL

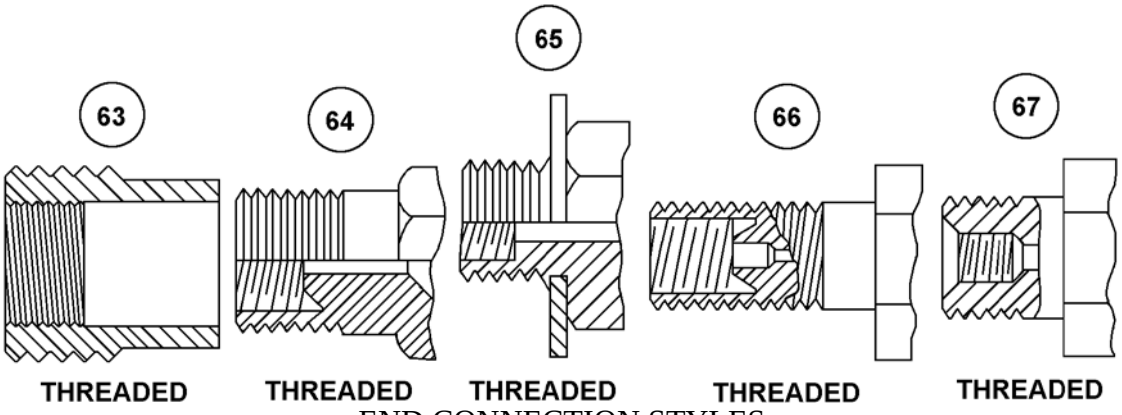
(No Requirements)



END CONNECTION STYLES

THREADED INTERNAL AND EXTERNAL

(No Requirements)



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FLANGED

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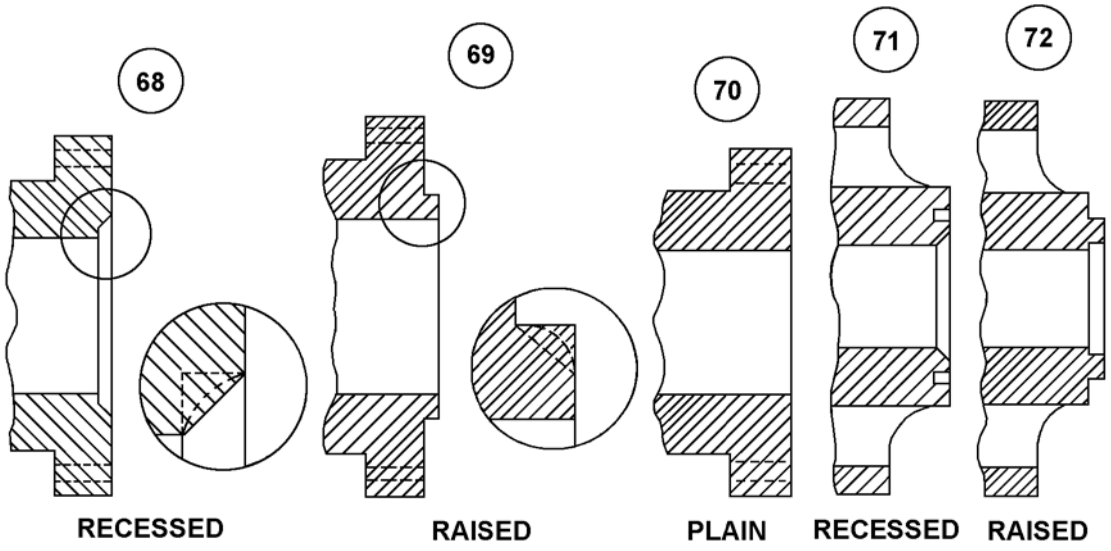

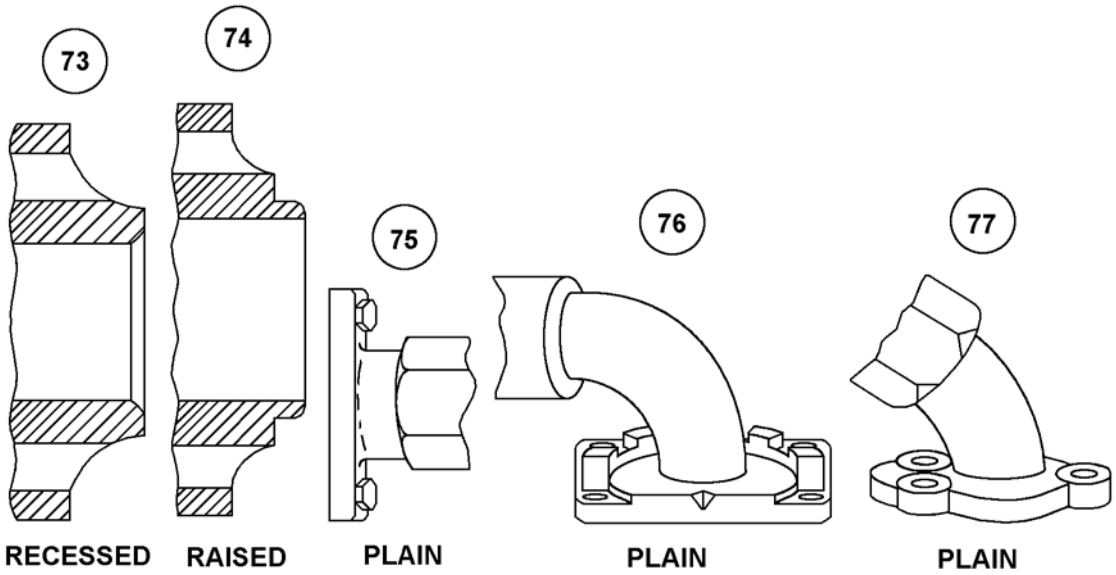

END CONNECTION STYLES

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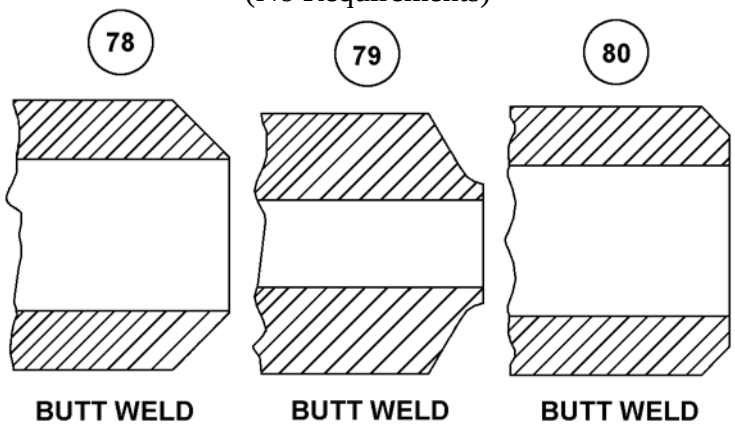
(No Requirements)



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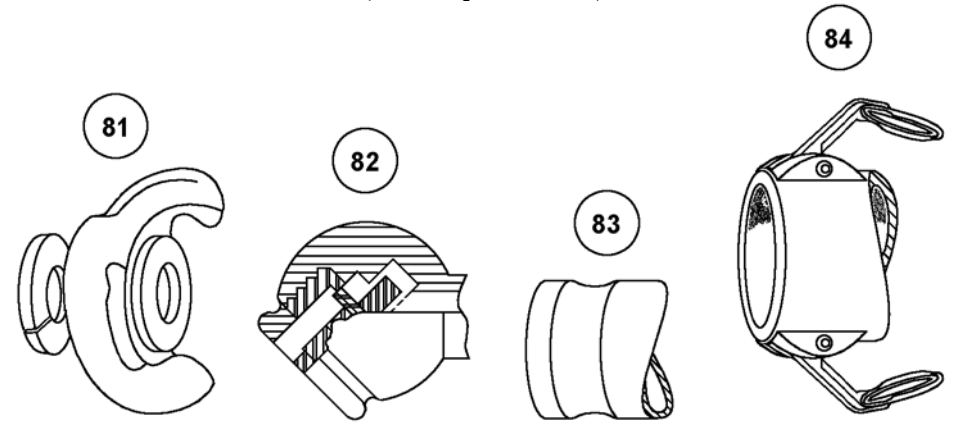
MISCELLANEOUS

(No Requirements)



Technical Data Tables

ALUMINUM AND ALUMINUM ALLOY PIPE WALL DIMENSIONS
(EXTRACTED FROM ASTM B-241-49T)

NOMINAL PIPE SIZE	OUTSIDE DIAMETER	NOMINAL WALL THICKNESS	
STANDARD WALL	EXTRA HEAVY WALL		
1/8	0.405	0.068	0.095
1/4	0.540	0.088	0.119
3/8	0.675	0.091	0.126
1/2	0.840	0.109	0.147
3/4	1.050	0.113	0.154
1	1.315	0.133	0.179
1-1/4	1.660	0.140	0.191
1-1/2	1.900	0.145	0.200
2	2.375	0.154	0.218
2-1/2	2.875	0.203	0.276
3	3.500	0.216	0.300
3-1/2	4.000	0.226	0.318
4	4.500	0.237	0.337
5	5.563	0.258	0.375
6	6.625	0.280	0.432
8	8.625	0.277	0.500
8	8.625	0.322	-----
10	10.750	0.279	0.500
10	10.750	0.307	-----
10	10.750	0.365	-----
12	12.750	0.330	0.500

NOTE-ITEMS CONFORMING TO THE ABOVE DIMENSIONS SHALL BE APPLICABLE TO "PIPE"; ALL OTHER DIMENSIONS SHALL BE APPLICABLE TO "TUBE."

NICKEL ALLOY PIPE WALL DIMENSIONS

NOMINAL PIPE SIZE	OUTSIDE DIAMETER	NOMINAL WALL THICKNESS		
SCHEDULE 10	SCHEDULE 40	SCHEDULE 80		
1/8	0.405	0.049	0.068	0.095

1/4	0.540	0.065	0.088	0.119
3/8	0.675	0.065	0.091	0.126
1/2	0.840	0.083	0.109	0.147
3/4	1.050	0.083	0.113	0.154
1	1.315	0.109	0.133	0.179
1-1/4	1.660	0.109	0.140	0.191
1-1/2	1.900	0.109	0.145	0.200
2	2.375	0.100	0.154	0.218
2-1/2	2.875	0.120	0.203	0.276
3	3.500	0.120	0.216	0.300
3-1/2	4.000	0.120	0.226	0.318
4	4.500	0.120	0.237	0.337
5	5.563	0.134	0.258	0.375
6	6.625	0.134	0.280	0.432
8	8.625	-----	0.322	0.500

NOTE-ITEMS CONFORMING TO THE ABOVE DIMENSIONS SHALL BE APPLICABLE TO "PIPE"; ALL OTHER DIMENSIONS SHALL BE APPLICABLE TO "TUBE."

BRASS, COPPER, AND BRONZE DIMENSIONS, WEIGHTS, AND TOLERANCES

BRASS, COPPER, AND BRONZE DIMENSIONS, WEIGHTS, AND TOLERANCES
BRASS, COPPER, AND BRONZE DIMENSIONS, WEIGHTS, AND TOLERANCES

(EXTRACTED FROM COPPER & BRASS RESEARCH ASSOCIATION STANDARDS. TABLES CORRESPOND TO THE NATIONAL BUREAU OF STANDARDS SIMPLIFIED PRACTICE RECOMMENDATIONS R217-46)

	WEIGHT PER FOOT TOLERANCES	WALL THICKNESS TOLERANCE	
STANDARD PIPE SIZE IN INCHES	PLUS AND MINUS	MINUS	PLUS
UP TO 6 INCL	5\%	*5\%	LIMITED ONLY
OVER 6 TO 8 INCL	7\%	*7\%	BY WEIGHT
OVER 8	8\%	*8\%	TOLERANCES

LENGTH TOLERANCES: STANDARD LENGTH 12 FEET PLUS AND MINUS 1/2".

STANDARD PIPE SIZE IN INCHES	WEIGHT PER FOOT TOLERANCES	WALL THICKNESS TOLERANCE	
	PLUS AND MINUS	MINUS	PLUS

*EXPRESSED TO THE NEAREST 0.001".

NOTE-THESE TOLERANCE SCHEDULES ARE USED BY THE INDUSTRY AS APPLICABLE TO COMMERCIAL MATERIAL, IN THE ABSENCE OF OTHER SPECIFICATION BY THE PURCHASER.

(EXTRACTED FROM COPPER & BRASS RESEARCH ASSOCIATION STANDARDS. TABLES CORRESPOND TO THE NATIONAL BUREAU OF STANDARDS SIMPLIFIED PRACTICE RECOMMENDATIONS R217-46)

STANDARD PIPE SIZE IN INCHES	NOMINAL DIMENSIONS IN INCHES	POUNDS PER FOOT			
OUTSIDE DIAMETER	INSIDE DIAMETER	WALL THICKNESS	RED BRASS	COPPER	
1/8	0.405	0.281	0.062	0.253	0.259
1/4	0.540	0.376	0.082	0.447	0.457
3/8	0.675	0.495	0.092	0.627	0.641
1/2	0.840	0.626	0.107	0.934	0.955
3/4	1.050	0.822	0.114	1.27	1.30
1	1.315	1.063	0.126	1.78	1.82
1-1/4	1.660	1.368	0.146	2.63	2.69
1-1/2	1.900	1.600	0.150	3.13	3.20
2	2.375	2.063	0.156	4.12	4.22
2-1/2	2.875	2.501	0.187	5.99	6.12
3	3.500	3.062	0.219	8.56	8.75
3-1/2	4.000	3.500	0.250	11.2	11.4
4	4.500	4.000	0.250	12.7	12.9
5	5.562	5.062	0.250	15.8	16.2
6	6.625	6.125	0.250	19.0	19.4
8	8.625	8.001	0.312	30.9	31.6
10	10.750	10.020	0.365	45	46.2
12	12.750	12.000	0.375	55.3	56.5

STANDARD PIPE SIZE IN INCHES	NOMINAL DIMENSIONS IN INCHES		POUNDS PER FOOT	
OUTSIDE DIAMETER	INSIDE DIAMETER	WALL THICKNESS	RED BRASS	COPPER

NOTE-ITEMS CONFORMING TO THE ABOVE DIMENSIONS SHALL BE APPLICABLE TO "PIPE"; ALL OTHER DIMENSIONS SHALL BE APPLICABLE TO "TUBE."

(EXTRACTED FROM COPPER & BRASS RESEARCH ASSOCIATION STANDARDS. TABLES CORRESPOND TO THE NATIONAL BUREAU OF STANDARDS SIMPLIFIED PRACTICE RECOMMENDATIONS R217-46)

STANDARD PIPE SIZE IN INCHES	NOMINAL DIMENSIONS IN INCHES		POUNDS PER FOOT		
OUTSIDE DIAMETER	INSIDE DIAMETER	WALL THICKNESS	RED BRASS	COPPER	
1/8	0.405	0.205	0.100	0.363	0.371
1/4	0.540	0.294	0.123	0.611	0.625
3/8	0.675	0.421	0.127	0.829	0.847
1/2	0.840	0.542	0.149	1.23	1.25
3/4	1.050	0.736	0.157	1.67	1.71
1	1.315	0.951	0.182	2.46	2.51
1-1/4	1.660	1.272	0.194	3.39	3.46
1-1/2	1.900	1.494	0.203	4.10	4.19
2	2.375	1.933	0.221	5.67	5.80
2-1/2	2.875	2.315	0.280	8.66	8.85
3	3.500	2.892	0.304	11.6	11.8
3-1/2	4.000	3.358	0.321	14.1	14.4
4	4.500	3.818	0.341	16.9	17.3
5	5.562	4.812	0.375	23.2	23.7
6	6.625	5.751	0.437	32.2	32.9
8	8.625	7.625	0.500	48.4	49.5
10	10.750	9.750	0.500	61.1	62.4

NOTE-ITEMS CONFORMING TO THE ABOVE DIMENSIONS SHALL BE APPLICABLE TO "PIPE"; ALL OTHER DIMENSIONS SHALL BE APPLICABLE TO "TUBE."

WELDED AND SEAMLESS CORROSION RESISTING STEEL PIPE WALL DIMENSIONS

NOMINAL PIPE SIZE	OUTSIDE DIAMETER	NOMINAL WALL THICKNESS			
SCHEDULE 5S**	SCHEDULE 10S**	SCHEDULE 40S	SCHEDULE 80S		
1/8	0.405	-	0.049	0.068	0.095
1/4	0.540	-	0.065	0.088	0.119
3/8	0.675	-	0.065	0.091	0.126
1/2	0.840	0.065	0.083	0.109	0.147
3/4	1.050	0.065	0.083	0.113	0.154
1	1.315	0.065	0.109	0.133	0.179
1-1/4	1.660	0.065	0.109	0.140	0.191
1-1/2	1.900	0.065	0.109	0.145	0.200
2	2.375	0.065	0.109	0.154	0.218
2-1/2	2.875	0.083	0.120	0.203	0.276
3	3.500	0.083	0.120	0.216	0.300
3-1/2	4.000	0.083	0.120	0.226	0.318
4	4.500	0.083	0.120	0.237	0.337
5	5.563	0.109	0.134	0.258	0.375
6	6.625	0.109	0.134	0.280	0.432
8	8.625	0.109	0.148	0.322	0.500
10	10.750	0.134	0.165	0.365	0.500*
12	12.750	0.156	0.180	0.375*	0.500*

*THESE DO NOT CONFORM TO ASA B36.10.

**SCHEDULE 5S AND 10S WALL THICKNESS DOES NOT PERMIT THREADING IN ACCORDANCE WITH ASA B2.1.

ALL DIMENSIONS ARE GIVEN IN INCHES. THE DECIMAL THICKNESS LISTED FOR THE RESPECTIVE PIPE SIZES REPRESENT THEIR NOMINAL OR AVERAGE WALL DIMENSIONS.

UNLESS OTHERWISE PROVIDED BY THE SPECIFICATION, THE ACTUAL WALL

THICKNESS AT ANY POINT SHALL NOT BE MORE THAN 12.5 PERCENT UNDER THE NOMINAL WALL THICKNESS SHOWN IN THE TABLES. PERMISSIBLE VARIATIONS IN OTHER DIMENSIONS ARE INDICATED IN ASTM SPECIFICATIONS FOR SEAMLESS ALLOY-STEEL PIPE FOR HIGH-TEMPERATURE SERVICE (A 158) AND SEAMLESS AND WELDED AUSTENITIC STAINLESS STEEL PIPE (A 312).

NOTE-ITEMS CONFORMING TO THE ABOVE DIMENSIONS SHALL BE APPLICABLE TO "PIPE"; ALL OTHER DIMENSIONS SHALL BE APPLICABLE TO "TUBE."

(EXTRACTED FROM AMERICAN STANDARD STAINLESS STEEL PIPE (ANS B36.19-1965), WITH THE PERMISSION OF THE PUBLISHER, THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS, 29 W. 39TH ST., NEW YORK 18, N.Y.)

WELDED AND SEAMLESS STEEL PIPE WALL DIMENSIONS

Nom. Pipe Size (In.)	Out-side Dia. (In.)	API								ASA				
Std. Wall	5L		5LX	Schedule			Std. Wall	Schedule		Extra Strong Wall	Schedule			Double Extra Strong Wall
Extra Strong Wall	Double Extra Strong Wall	Std. Wall	10	20	30	40	60	80	100	120	140	160		

COLUMN 1 NOMINAL PIPE SIZE	COLUMN 2 SCHEDULE	COLUMN 3 IDENTICAL WALL THICKNESSES																
1/8	0.405	0.068	--	--	--	--	--	--	0.068	0.068	--	--	--	--	--	--	--	--
1/8	0.405	--	0.095	--	--	--	--	--	--	--	--	0.095	0.095	--	--	--	--	--
1/4	0.540	0.088	--	--	--	--	--	--	0.088	0.088	--	--	--	--	--	--	--	--
1/4	0.540	--	0.119	--	--	--	--	--	--	--	--	0.119	0.119	--	--	--	--	--
3/8	0.675	0.091	--	--	--	--	--	--	0.091	0.091	--	--	--	--	--	--	--	--
3/8	0.675	--	0.126	--	--	--	--	--	--	--	--	0.126	0.126	--	--	--	--	--
1/2	0.840	0.109	--	--	--	--	--	--	0.109	0.109	--	--	--	--	--	--	--	--
1/2	0.840	--	0.147	--	--	--	--	--	--	--	--	0.147	0.147	--	--	--	--	--
1/2	0.840	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.188	--
1/2	0.840	--	--	0.294	--	--	--	--	--	--	--	--	--	--	--	--	--	0.294
3/4	1.050	0.113	--	--	--	--	--	--	0.113	0.113	--	--	--	--	--	--	--	--
3/4	1.050	--	0.154	--	--	--	--	--	--	--	--	0.154	0.154	--	--	--	--	--
3/4	1.050	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.21	--

																	9	
3/4	1.050	--	--	0.308	--	--	--	--	--	--	--	--	--	--	--	--	--	0.308
1	1.315	0.133	--	--	--	--	--	--	0.133	0.133	--	--	--	--	--	--	--	--
1	1.315	--	0.179	--	--	--	--	--	--	--	--	0.179	0.179	--	--	--	--	--
1	1.315	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.250	--
1	1.315	--	--	0.358	--	--	--	--	--	--	--	--	--	--	--	--	--	0.358
1-1/4	1.660	0.140	--	--	--	--	--	--	0.140	0.140	--	--	--	--	--	--	--	--
1-1/4	1.660	--	0.191	--	--	--	--	--	--	--	--	0.191	0.191	--	--	--	--	--
1-1/4	1.660	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.250	--
1-1/4	1.660	--	--	0.382	--	--	--	--	--	--	--	--	--	--	--	--	--	0.382
1-1/2	1.900	0.145	--	--	--	--	--	--	0.145	0.145	--	--	--	--	--	--	--	--
1-1/2	1.900	--	0.200	--	--	--	--	--	--	--	--	0.200	0.200	--	--	--	--	--
1-1/2	1.900	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.281	--
1-1/2	1.900	--	--	0.400	--	--	--	--	--	--	--	--	--	--	--	--	--	0.400
2	2.375	0.154	--	--	--	--	--	--	0.154	0.154	--	--	--	--	--	--	--	--
2	2.375	--	0.218	--	--	--	--	--	--	--	--	0.218	0.218	--	--	--	--	--

2	2.375	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.344	--
2	2.375	--	--	0.436	--	--	--	--	--	--	--	--	--	--	--	--	--	0.436
2-1/2	2.875	0.203	--	--	--	--	--	--	0.203	0.203	--	--	--	--	--	--	--	--
2-1/2	2.875	--	0.276	--	--	--	--	--	--	--	--	0.276	0.276	--	--	--	--	--
2-1/2	2.875	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.375	--
2-1/2	2.875	--	--	0.552	--	--	--	--	--	--	--	--	--	--	--	--	--	0.552
3	3.500	0.125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	3.500	0.156	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	3.500	0.188	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	3.500	0.216	--	--	--	--	--	--	0.216	0.216	--	--	--	--	--	--	--	--
3	3.500	0.250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	3.500	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3	3.500	--	0.300	--	--	--	--	--	--	--	--	0.300	0.300	--	--	--	--	--
3	3.500	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.438	--
3	3.500	--	--	0.600	--	--	--	--	--	--	--	--	--	--	--	--	--	0.600
3-1/2	4.000	0.125	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-1/2	4.000	0.138	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-1/2	4.000	0.188	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-1/2	4.000	0.226	--	--	--	--	--	--	0.226	0.226	--	--	--	--	--	--	--	--
3-1/2	4.000	0.250	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-1/2	4.000	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3-1/2	4.000	--	0.318	--	--	--	--	--	--	--	--	0.318	0.318	--	--	--	--	--

3-1/2	4.000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.636
4	4.500	0.125	--	--	0.125	--	--	--	--	--	--	--	--	--	--	--	--	--
4	4.500	0.141	--	--	0.141	--	--	--	--	--	--	--	--	--	--	--	--	--
4	4.500	0.156	--	--	0.156	--	--	--	--	--	--	--	--	--	--	--	--	--
4	4.500	0.172	--	--	0.172	--	--	--	--	--	--	--	--	--	--	--	--	--
4	4.500	0.188	--	--	0.188	--	--	--	--	--	--	--	--	--	--	--	--	--
4	4.500	0.203	--	--	0.203	--	--	--	--	--	--	--	--	--	--	--	--	--
4	4.500	0.219	--	--	0.219	--	--	--	--	--	--	--	--	--	--	--	--	--
4	4.500	0.237	--	--	0.237	--	--	--	0.237	0.237	--	--	--	--	--	--	--	--
4	4.500	0.250	--	--	0.250	--	--	--	--	--	--	--	--	--	--	--	--	--
4	4.500	0.281	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
4	4.500	0.312	--	--	0.312	--	--	--	--	--	--	--	--	--	--	--	--	--
4	4.500	--	0.337	--	0.337	--	--	--	--	--	--	0.337	0.337	--	--	--	--	--
4	4.500	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	0.438	--	--	--
4	4.500	0.531	--	--	0.531	--	--	--	--	--	--	--	--	--	--	--	0.531	--
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5	5.563	0.156	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	5.563	0.188	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	5.563	0.219	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	5.563	0.258	--	--	--	--	--	--	0.258	0.258	--	--	--	--	--	--	--	--
5	5.563	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	5.563	0.312	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	5.563	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5	5.563	0.375	--	--	--	--	--	--	--	--	--	0.375	0.375	--	--	--	--	--
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5	5.563	--	--	0.750	--	--	--	--	--	--	--	--	--	--	--	--	--	0.750
6	6.625	0.125	--	--	0.125	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6.625	0.141	--	--	0.141	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6.625	0.156	--	--	0.156	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6.625	0.172	--	--	0.172	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6.625	0.188	--	--	0.188	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6.625	0.203	--	--	0.203	--	--	--	--	--	--	--	--	--	--	--	--	--
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6	6.625	0.280	--	--	0.280	--	--	--	0.280	0.280	--	--	--	--	--	--	--	--
6	6.625	0.312	--	--	0.312	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6.625	0.344	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
6	6.625	0.375	--	--	0.375	--	--	--	--	--	--	--	--	--	--	--	--	--
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6	6.625	0.500	--	--	0.500	--	--	--	--	--	--	--	--	--	--	--	--	--
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6	6.625	0.719	--	--	0.719	--	--	--	--	--	--	--	--	--	--	--	0.719	--
6	6.625	--	--	0.864	--	--	--	--	--	--	--	--	--	--	--	--	--	0.864
8	8.625	0.188	--	--	0.188	--	--	--	--	--	--	--	--	--	--	--	--	--
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8	8.625	0.250	--	--	0.250	--	0.250	--	--	--	--	--	--	--	--	--	--	--
8	8.625	0.277	--	--	0.277	--	--	0.277	--	--	--	--	--	--	--	--	--	--

8	8.625	0.312	--	--	0.312	--	--	--	--	--	--	--	--	--	--	--	--	--
8	8.625	0.322	--	--	0.322	--	--	--	0.322	0.322	--	--	--	--	--	--	--	--
8	8.625	0.344	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
8	8.625	0.375	--	--	0.375	--	--	--	--	--	--	--	--	--	--	--	--	--
8	8.625	--	--	--	--	--	--	--	--	--	0.406	--	--	--	--	--	--	--
8	8.625	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
8	8.625	--	0.500	--	0.500	--	--	--	--	--	--	0.500	0.500	--	--	--	--	--
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8	8.625	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--
8	8.625	0.719	--	--	--	--	--	--	--	--	--	--	--	--	0.719	--	--	--
8	8.625	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.812	--	--
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8	8.625	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.906	--
10	10.750	0.188	--	--	0.188	--	--	--	--	--	--	--	--	--	--	--	--	--
10	10.750	--	--	--	0.20	--	--	--	--	--	--	--	--	--	--	--	--	--

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10	10.750	0.250	--	--	0.250	--	0.250	--	--	--	--	--	--	--	--	--	--	--
10	10.750	0.279	--	--	0.279	--	--	--	--	--	--	--	--	--	--	--	--	--
10	10.750	0.307	--	--	0.307	--	--	--	--	--	--	--	--	--	--	--	--	--
10	10.750	0.344	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
10	10.750	0.365	--	--	0.365	--	--	--	0.365	0.365	--	--	--	--	--	--	--	--
10	10.750	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
10	10.750	--	0.500	--	0.500	--	--	--	--	--	0.500	0.500	--	--	--	--	--	--
10	10.750	0.562	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--	--	--
10	10.750	--	--	--	--	--	--	--	--	--	--	--	0.594	--	--	--	--	--
10	10.750	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--
10	10.750	0.719	--	--	0.719	--	--	--	--	--	--	--	--	0.719	--	--	--	--
10	10.750	0.812	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	10.750	--	--	--	--	--	--	--	--	--	--	--	--	--	0.844	--	--	--
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12	12.750	0.219	--	--	0.219	--	--	--	--	--	--	--	--	--	--	--	--	--
12	12.750	0.250	--	--	0.250	--	0.250	--	--	--	--	--	--	--	--	--	--	--
12	12.750	0.281	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
12	12.750	0.312	--	--	0.312	--	--	--	--	--	--	--	--	--	--	--	--	--
12	12.750	0.330	--	--	0.330	--	--	0.330	--	--	--	--	--	--	--	--	--	--
12	12.750	0.344	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
12	12.750	0.375	--	--	0.375	--	--	--	0.375	--	--	--	--	--	--	--	--	--
12	12.750	--	--	--	0.406	--	--	--	--	0.406	--	--	--	--	--	--	--	--
12	12.750	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
12	12.750	--	0.500	--	0.500	--	--	--	--	--	--	0.500	--	--	--	--	--	--
12	12.750	0.562	--	--	0.562	--	--	--	--	--	0.562	--	--	--	--	--	--	--
12	12.750	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--
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12	12.750	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.125	--	--
12	12.750	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.312	--
14	14.000	--	--	--	0.210	--	--	--	--	--	--	--	--	--	--	--	--	--
14	14.000	--	--	--	0.219	--	--	--	--	--	--	--	--	--	--	--	--	--
14	14.000	0.250	--	--	0.250	0.250	--	--	--	--	--	--	--	--	--	--	--	--
14	14.000	0.281	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
14	14.000	0.312	--	--	0.312	--	0.312	--	--	--	--	--	--	--	--	--	--	--
14	14.000	0.344	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
14	14.000	0.375	--	--	0.375	--	--	0.375	0.375	--	--	--	--	--	--	--	--	--
14	14.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--
14	14.000	0.438	--	--	0.438	--	--	--	--	0.438	--	--	--	--	--	--	--	--
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14	14.000	0.500	--	--	0.500	--	--	--	--	--	--	0.500	--	--	--	--	--	--
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14	14.000	--	--	--	--	--	--	--	--	--	0.594	--	--	--	--	--	--	--
14	14.000	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--
14	14.000	0.688	--	--	0.688	--	--	--	--	--	--	--	--	--	--	--	--	--
14	14.000	0.750	--	--	0.750	--	--	--	--	--	--	--	0.750	--	--	--	--	--
14	14.000	0.812	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
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16	16.000	--	--	--	0.203	--	--	--	--	--	--	--	--	--	--	--	--	--
16	16.000	--	--	--	0.219	--	--	--	--	--	--	--	--	--	--	--	--	--
16	16.000	0.250	--	--	0.250	0.250	--	--	--	--	--	--	--	--	--	--	--	--
16	16.000	0.281	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
16	16.000	0.312	--	--	0.31	--	0.31	--	--	--	--	--	--	--	--	--	--	--

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16	16.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--
16	16.000	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
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16	16.000	0.500	--	--	0.500	--	--	--	--	0.500	--	0.500	--	--	--	--	--	--
16	16.000	0.562	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--	--	--
16	16.000	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--
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16	16.000	0.750	--	--	0.750	--	--	--	--	--	--	--	--	--	--	--	--	--
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18	18.000	0.250	--	--	0.250	--	--	--	--	--	--	--	--	--	--	--	--	--
18	18.000	0.281	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
18	18.000	0.312	--	--	0.312	--	0.312	--	--	--	--	--	--	--	--	--	--	--
18	18.000	0.344	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
18	18.000	0.375	--	--	0.375	--	--	--	0.375	--	--	--	--	--	--	--	--	--
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18	18.000	0.438	--	--	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--
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18	18.000	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--
18	18.000	0.688	--	--	0.688	--	--	--	--	--	--	--	--	--	--	--	--	--
18	18.000	0.750	--	--	0.750	--	--	--	--	--	0.750	--	--	--	--	--	--	--

18	18.000	0.812	--	--	0.812	--	--	--	--	--	--	--	--	--	--	--	--	--
18	18.000	--	--	--	--	--	--	--	--	--	--	--	0.938	--	--	--	--	--
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20	20.000	--	--	--	0.219	--	--	--	--	--	--	--	--	--	--	--	--	--
20	20.000	0.281	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
20	20.000	0.312	--	--	0.312	--	--	--	--	--	--	--	--	--	--	--	--	--
20	20.000	0.344	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
20	20.000	0.375	--	--	0.375	--	0.375	--	0.375	--	--	--	--	--	--	--	--	--
20	20.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--
20	20.000	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
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20	20.000	0.500	--	--	0.500	--	--	0.500	--	--	--	--	--	--	--	--	--	--
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20	20.000	0.688	--	--	0.688	--	--	--	--	--	--	--	--	--	--	--	--	--
20	20.000	0.750	--	--	0.750	--	--	--	--	--	--	--	--	--	--	--	--	--
20	20.000	0.812	--	--	0.812	--	--	--	--	--	0.812	--	--	--	--	--	--	--
20	20.000	--	--	--	--	--	--	--	--	--	--	--	1.031	--	--	--	--	--
20	20.000	--	--	--	--	--	--	--	--	--	--	--	--	1.281	--	--	--	--
20	20.000	--	--	--	--	--	--	--	--	--	--	--	--	--	1.500	--	--	--
20	20.000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.750	--	--
20	20.000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.969	--
20	20.000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	--	--	--	0.219	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	0.250	--	--	0.250	0.250	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	0.281	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	0.312	--	--	0.312	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	0.344	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--

22	22.000	0.375	--	--	0.375	--	0.375	0.375	--	--	--	--	--	--	--	--	--	--
22	22.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	--	--	--	0.469	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	0.500	--	--	0.500	--	--	--	0.500	--	--	--	--	--	--	--	--	--
22	22.000	0.562	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	0.688	--	--	0.688	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	0.750	--	--	0.750	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	0.812	--	--	0.812	--	--	--	--	--	--	--	--	--	--	--	--	--
22	22.000	--	--	--	--	--	--	--	--	--	0.875	--	--	--	--	--	--	--
22	22.000	--	--	--	--	--	--	--	--	--	--	--	1.125	--	--	--	--	--
22	22.000	--	--	--	--	--	--	--	--	--	--	--	--	1.375	--	--	--	--
22	22.000	--	--	--	--	--	--	--	--	--	--	--	--	--	1.625	--	--	--
22	22.000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.875	--	--
22	22.000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.12	--

																		5	
24	24.000	0.250	--	--	0.250	0.250	--	--	--	--	--	--	--	--	--	--	--	--	--
24	24.000	0.281	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	24.000	0.312	--	--	0.312	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	24.000	0.344	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	24.000	0.375	--	--	0.375	--	0.375	--	--	--	--	--	--	--	--	--	--	--	--
24	24.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	24.000	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	24.000	--	--	--	0.469	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	24.000	0.500	--	--	0.500	--	--	--	--	--	--	0.500	--	--	--	--	--	--	--
24	24.000	0.562	--	--	0.562	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--
24	24.000	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	24.000	0.688	--	--	0.688	--	--	--	--	0.688	--	--	--	--	--	--	--	--	--
24	24.000	0.750	--	--	0.750	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	24.000	0.812	--	--	0.812	--	--	--	--	--	--	--	--	--	--	--	--	--	--
24	24.000	--	--	--	--	--	--	--	--	--	0.969	--	--	--	--	--	--	--	--
24	24.00	--	--	--	--	--	--	--	--	--	--	--	1.	--	--	--	--	--	--

	0												219					
24	24.000	--	--	--	--	--	--	--	--	--	--	--	--	1.531	--	--	--	--
24	24.000	--	--	--	--	--	--	--	--	--	--	--	--	--	1.812	--	--	--
24	24.000	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.062	--	--
24	24.000	--	--	- -	--	--	--	--	--	--	--	--	--	--	--	--	2.344	--
26	26.000	0.250	--	--	0.250	--	--	--	--	--	--	--	--	--	--	--	--	--
26	26.000	0.281	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
26	26.000	0.312	--	--	0.312	0.312	--	--	--	--	--	--	--	--	--	--	--	--
26	26.000	0.344	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
26	26.000	0.375	--	--	0.375	--	--	--	0.375	--	--	--	--	--	--	--	--	--
26	26.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--
26	26.000	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
26	26.000	--	--	--	0.469	--	--	--	--	--	--	--	--	--	--	--	--	--
26	26.000	0.500	--	--	0.500	--	--	--	--	0.500	--	--	--	--	--	--	--	--
26	26.000	0.562	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--	--	--
26	26.000	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--

26	26.000	0.688	--	--	0.688	--	--	--	--	--	--	--	--	--	--	--	--	--
26	26.000	0.750	--	--	0.750	--	--	--	--	--	--	--	--	--	--	--	--	--
28	28.000	--	--	--	0.250	--	--	--	--	--	--	--	--	--	--	--	--	--
28	28.000	--	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
28	28.000	--	--	--	0.312	0.312	--	--	--	--	--	--	--	--	--	--	--	--
28	28.000	--	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
28	28.000	0.375	--	--	0.375	--	--	--	0.375	--	--	--	--	--	--	--	--	--
28	28.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--
28	28.000	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
28	28.000	--	--	--	0.469	--	--	--	--	--	--	--	--	--	--	--	--	--
28	28.000	0.500	--	--	0.500	--	--	--	--	0.500	--	--	--	--	--	--	--	--
28	28.000	0.625	--	--	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--
30	30.000	--	--	--	0.250	--	--	--	--	--	--	--	--	--	--	--	--	--
30	30.000	--	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
30	30.000	--	--	--	0.312	0.312	--	--	--	--	--	--	--	--	--	--	--	--
30	30.00	--	--	--	0.	--	--	--	--	--	--	--	--	--	--	--	--	--

	0				34 4													
30	30.000	0.375	--	--	0.375	--	--	--	0.375	--	--	--	--	--	--	--	--	--
30	30.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--
30	30.000	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
30	30.000	--	--	--	0.469	--	--	--	--	--	--	--	--	--	--	--	--	--
30	30.000	0.500	--	--	0.500	--	0.500	--	--	--	--	0.500	--	--	--	--	--	--
30	30.000	0.562	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--	--	--
30	30.000	0.625	--	--	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--
32	32.000	--	--	--	0.250	--	--	--	--	--	--	--	--	--	--	--	--	--
32	32.000	--	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
32	32.000	--	--	--	0.312	0.312	--	--	--	--	--	--	--	--	--	--	--	--
32	32.000	--	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
32	32.000	0.375	--	--	0.375	--	--	--	0.375	--	--	--	--	--	--	--	--	--
32	32.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--
32	32.000	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
32	32.000	--	--	--	0.46	--	--	--	--	--	--	--	--	--	--	--	--	--

					9													
32	32.000	0.500	--	--	0.500	--	0.500	--	--	--	--	0.500	--	--	--	--	--	--
32	32.000	0.562	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--	--	--
32	32.000	0.625	--	--	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--
32	32.000	--	--	--	--	--	--	--	--	0.688	--	--	--	--	--	--	--	--
34	34.000	--	--	--	0.250	--	--	--	--	--	--	--	--	--	--	--	--	--
34	34.000	--	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
34	34.000	--	--	--	0.312	0.312	--	--	--	--	--	--	--	--	--	--	--	--
34	34.000	--	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
34	34.000	0.375	--	--	0.375	--	--	--	0.375	--	--	--	--	--	--	--	--	--
34	34.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--
34	34.000	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
34	34.000	--	--	--	0.469	--	--	--	--	--	--	--	--	--	--	--	--	--
34	34.000	0.500	--	--	0.500	--	0.500	--	--	--	--	0.500	--	--	--	--	--	--
34	34.000	0.562	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--	--	--
34	34.000	0.625	--	--	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--
34	34.00	--	--	--	--	--	--	--	--	0.6	--	--	--	--	--	--	--	--

	0									88								
36	36.000	--	--	--	0.250	--	--	--	--	--	--	--	--	--	--	--	--	--
36	36.000	--	--	--	0.281	--	--	--	--	--	--	--	--	--	--	--	--	--
36	36.000	--	--	--	0.312	0.312	--	--	--	--	--	--	--	--	--	--	--	--
36	36.000	--	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
36	36.000	0.375	--	--	0.375	--	--	--	0.375	--	--	--	--	--	--	--	--	--
36	36.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--
36	36.000	0.438	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
36	36.000	--	--	--	0.469	--	--	--	--	--	--	--	--	--	--	--	--	--
36	36.000	0.500	--	--	0.500	--	0.500	--	--	--	--	0.500	--	--	--	--	--	--
36	36.000	0.562	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--	--	--
36	36.000	0.625	--	--	0.625	--	--	0.625	--	--	--	--	--	--	--	--	--	--
36	36.000	--	--	--	--	--	--	--	--	0.750	--	--	--	--	--	--	--	--
38	38.000	--	--	--	0.312	--	--	--	--	--	--	--	--	--	--	--	--	--
38	38.000	--	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
38	38.000	--	--	--	0.375	--	--	--	--	--	--	--	--	--	--	--	--	--
38	38.00	--	--	--	0.	--	--	--	--	--	--	--	--	--	--	--	--	--

	0				406													
38	38.000	--	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
38	38.000	--	--	--	0.469	--	--	--	--	--	--	--	--	--	--	--	--	--
38	38.000	--	--	--	0.500	--	--	--	--	--	--	--	--	--	--	--	--	--
38	38.000	--	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--	--	--
38	38.000	--	--	--	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--
40	40.000	--	--	--	0.344	--	--	--	--	--	--	--	--	--	--	--	--	--
40	40.000	--	--	--	0.375	--	--	--	--	--	--	--	--	--	--	--	--	--
40	40.000	--	--	--	0.406	--	--	--	--	--	--	--	--	--	--	--	--	--
40	40.000	--	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
40	40.000	--	--	--	0.469	--	--	--	--	--	--	--	--	--	--	--	--	--
40	40.000	--	--	--	0.500	--	--	--	--	--	--	--	--	--	--	--	--	--
40	40.000	--	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--	--	--
40	40.000	--	--	--	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--
42	42.000	--	--	--	0.375	--	--	--	--	--	--	--	--	--	--	--	--	--
42	42.000	--	--	--	0.40	--	--	--	--	--	--	--	--	--	--	--	--	--

					6													
42	42.000	--	--	--	0.438	--	--	--	--	--	--	--	--	--	--	--	--	--
42	42.000	--	--	--	0.469	--	--	--	--	--	--	--	--	--	--	--	--	--
42	42.000	--	--	--	0.500	--	--	--	--	--	--	--	--	--	--	--	--	--
42	42.000	--	--	--	0.562	--	--	--	--	--	--	--	--	--	--	--	--	--
42	42.000	--	--	--	0.625	--	--	--	--	--	--	--	--	--	--	--	--	--
1/8 TO 10	40	STANDARD WALL																
1/8 TO 8	80	EXTRA STRONG WALL																
10	60	EXTRA STRONG WALL																
14	30	STANDARD WALL																
16	30	STANDARD WALL																
16	40	EXTRA STRONG WALL																
20 TO 24	20	STANDARD WALL																
20 TO 22	30	EXTRA STRONG WALL																
26 TO	20	EXTRA STRON																

36 G
WALL

(EXTRACTED FROM AMERICAN STANDARD WROUGHT-STEEL AND WROUGHT-IRON PIPE (ANS B36.10-1970) WITH THE PERMISSION OF THE PUBLISHER, THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS, 29 WEST 39TH STREET, NEW YORK 18, N.Y.) (EXTRACTED FROM AMERICAN PETROLEUM INSTITUTE 5L AND 5LX STANDARDS FOR LINE PIPE AND HEIGHT-TEST LINE PIPE WITH THE PERMISSION OF THE DIRECTOR, DIVISION OF PUBLICATION, 300 CORRIGAN TOWERS BUILDING, DALLAS 1, TEXAS.)

ALL DIMENSIONS ARE GIVEN IN INCHES.

NOTE 1 - WHEN THE API "WALL THICKNESS" IS THE SAME AS THE ASA WALL THICKNESS, UTILIZE THE ASA WALL THICKNESS DESIGNATION TERMINOLOGY FOR DESCRIBING ALL ITEMS.

WALL THICKNESS FOR NOMINAL PIPE SIZES LISTED BELOW UNDER COLUMN 1 FOR THE SCHEDULES LISTED UNDER COLUMN 2 ARE IDENTICAL WITH THE WALL THICKNESSES LISTED UNDER COLUMN 3. USE COLUMN 2 TERMINOLOGY.

THE DECIMAL THICKNESSES LISTED FOR THE RESPECTIVE PIPE SIZES REPRESENT THEIR NOMINAL OR AVERAGE WALL DIMENSIONS. FOR TOLERANCES ON WALL THICKNESSES, SEE APPROPRIATE MATERIAL SPECIFICATIONS. UNLESS OTHERWISE PROVIDED BY THE SPECIFICATION, THE ACTUAL WALL THICKNESS AT ANY POINT SHALL NOT BE MORE THAN 12.5 PERCENT UNDER THE NOMINAL WALL THICKNESS SHOWN IN THE TABLES. PERMISSIBLE VARIATIONS FOR OTHER DIMENSIONS ARE INDICATED IN EACH SPECIFICATION.

NOTE 2 - ITEMS CONFORMING TO THE DIMENSIONS LISTED IN THE CHART SHALL BE APPLICABLE TO "PIPE." ALL OTHER ITEMS NOT CONFORMING TO THE DIMENSIONS OF THE CHART SHALL BE APPLICABLE TO "TUBE."

WELDED WROUGHT-IRON PIPE WALL DIMENSIONS

NOMINAL PIPE SIZE	OUTSIDE DIAMETER	NOMINAL WALL THICKNESS		
			DOUBLE	
		EXTRA	EXTRA	
		STRONG	STRONG	
STANDARD WALL		WALL	WALL	
1/8	0.405	0.069	0.099	-
1/4	0.540	0.090	0.122	-
3/8	0.675	0.093	0.129	-
1/2	0.840	0.111	0.151	0.307
3/4	1.050	0.115	0.157	0.318
1	1.315	0.136	0.183	0.369
1-1/4	1.660	0.143	0.195	0.393
1-1/2	1.900	0.148	0.204	0.411
2	2.375	0.158	0.223	0.447
2-1/2	2.875	0.208	0.282	0.567
3	3.500	0.221	0.306	0.615
*3-1/2	*4.000	*0.231	*0.325	-
*3-1/2	*4.000	*0.231	*0.325	*0.651
4	4.500	0.242	0.344	0.690
5	5.563	0.263	0.383	0.768
6	6.625	0.286	0.441	0.884
8	8.625	0.329	0.510	0.895
10	10.750	0.372	0.510	-
12	12.750	0.383	0.510	-
*12	*12.750	0.336	-	-
14	14.000	0.383	0.510	-
16	16.000	0.383	0.510	-
18	18.000	0.383	0.510	-
20	20.000	0.383	0.510	-
24	24.000	0.383	0.510	-

ALL DIMENSIONS ARE GIVEN IN INCHES. THE DECIMAL THICKNESS LISTED FOR THE RESPECTIVE PIPE SIZES REPRESENT THEIR NOM OR AVERAGE WALL DIMENSIONS. FOR TOLERANCES ON WALL THICKNESSES, SEE APPROPRIATE MATERIAL SPECIFICATION.

UNLESS OTHERWISE PROVIDED BY THE SPECIFICATION, THE ACTUAL WALL THICKNESS AT ANY POINT SHALL NOT BE MORE THAN 12.5 PERCENT

UNDER THE NOMINAL WALL THICKNESS SHOWN IN THE TABLES. PERMISSIBLE VARIATIONS FOR OTHER DIMENSIONS ARE INDICATED IN EACH SPECIFICATION.

NOTE-ITEMS CONFORMING TO THE ABOVE DIMENSIONS SHALL BE APPLICABLE TO "PIPE." ALL OTHER DIMENSIONS SHALL BE APPLICABLE TO "TUBE."

*CONSIDERED SPECIAL SIZE PIPE. DOES NOT CONFORM TO ASA B36.10.

(EXTRACTED FROM AMERICAN STANDARD WROUGHT-STEEL AND WROUGHT-IRON PIPE (ASA B36.10-1950), WITH THE PERMISSION OF THE PUBLISHER, THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS, 29 W. 39TH ST., NEW YORK 18, N.Y.)

STANDARD FRACTION TO DECIMAL CONVERSION CHART

4ths	8ths	16ths	32nds	64ths	To 3	To 4	4ths	8ths	16ths	32nds	64ths	To 3	To 4
				1/64	.016	.0156					33/64	.516	.5156
			1/32	-----	.031	.0312				17/32	------	.531	.5312
				3/64	.047	.0469					35/64	.547	.5469
		1/16	-----		.062	.0625			9/16	-----	-----	.562	.5625
				5/64	.078	.0781					37/64	.578	.5781
			3/32	-----	.094	.0938				19/32	------	.594	.5938
				7/64	.109	.1094					39/64	.609	.6094
	1/8	-----	-----	-----	.125	.1250		5/8	-----	-----	-----	.625	.6250
				9/64	.141	.1406					41/64	.641	.6406
			5/32	-----	.156	.1562				21/32	------	.656	.6562
				11/64	.172	.1719					43/64	.672	.6719
		3/16	-----	-----	.188	.1875			11/16	-----	-----	.688	.6875
				13/64	.203	.2031					45/64	.703	.7031
			7/32	------	.219	.2188				23/32	------	.719	.7188
				15/64	.234	.2344					47/64	.734	.7344
1/4	-----	-----	-----	-----	.250	.2500	3/4	-----	-----	-----	-----	.750	.7500
				17/64	.266	.2656					49/64	.766	.7656
			9/32	------	.281	.2812				25/32	------	.781	.7812
				19/64	.297	.2969					51/64	.797	.7969
		5/16	-----	-----	.312	.3125			13/16	-----	-----	.812	.8125
				21/64	.328	.3281					53/64	.828	.8281
			11/32	------	.344	.3438				27/32	------	.844	.8438
				23/64	.359	.3594					55/64	.859	.8594
	3/8	-----	-----	-----	.375	.3750		7/8	-----	-----	-----	.875	.8750
				25/64	.391	.3906					57/64	.891	.8906
			13/32	------	.406	.4062				29/32	------	.906	.9062
				27/64	.422	.4219					59/64	.922	.9219
		7/16	-----	-----	.438	.4375			15/16	-----	-----	.938	.9375
				29/64	.453	.4531					61/64	.953	.9531
			15/32	------	.469	.4688				31/32	------	.969	.9688
				31/64	.484	.4844					63/64	.984	.9844
					.500	.5000						1.000	1.0000

CELSIUS-FAHRENHEIT CONVERSION TABLE

CONVERTED TO CELSIUS	TEMP READING	CONVERTED TO FAHRENHEIT
-62.2	-80	-112.0
-56.7	-70	-94.0
-51.1	-60	-76.0
-45.6	-50	-58.0
-40.0	-40	-40.0
-34.4	-30	-22.0
-31.7	-25	-13.0
-28.9	-20	-4.0
-26.1	-15	+5.0
-23.3	-10	14.0
-20.6	-5	23.0
-17.8	0	32.0
-15.0	5	41.0
-12.22	10	50.0
-9.44	15	59.0
-6.67	20	68.0
-3.89	25	77.0
-1.11	30	86.0
1.67	35	95.0
4.44	40	104.0
7.22	45	113.0
10.00	50	122.0
12.78	55	131.0
15.56	60	140.0
18.33	65	149.0
21.11	70	158.0
23.89	75	167.0
26.67	80	176.0
29.44	85	185.0
32.22	90	194.0
35.00	95	203.0
37.78	100	212.0
40.56	105	221.0
43.33	110	230.0
46.11	115	239.0
48.89	120	248.0
51.67	125	257.0
54.44	130	266.0
57.22	135	275.0
60.00	140	284.0

65.56	150	302.0
71.11	160	320.0
76.67	170	338.0
82.22	180	356.0
87.78	190	374.0
93.33	200	392.0
98.89	210	410.0
104.44	220	428.0
110.00	230	446.0
115.56	240	464.0
121.11	250	482.0
126.67	260	500.0
132.22	270	518.0
137.78	280	536.0
143.33	290	554.0
148.89	300	572.0
154.44	310	590.0
160.00	320	608.0
165.66	330	626.0
171.11	340	644.0
176.67	350	662.0
182.22	360	680.0
187.78	370	698.0
193.33	380	716.0
198.89	390	734.0
204.44	400	752.0
210.00	410	770.0
215.56	420	788.0
221.11	430	806.0
226.67	440	824.0
232.22	450	842.0
237.78	460	860.0
243.33	470	878.0
248.89	480	896.0
254.44	490	914.0
260.00	500	932.0
265.56	510	950.0
271.11	520	968.0
276.67	530	986.0
282.22	540	1004.0
287.78	550	1022.0

The middle column of figures contains the reading (|SDF or |SDC) to be converted. If converting from degrees Fahrenheit to degrees Celsius, read the Celsius equivalent in the column headed

"Converted to Celsius". If converting from Celsius to Fahrenheit, read the Fahrenheit equivalent in the column headed "Converted to Fahrenheit".

FIIG Change List

FIIG Change List, Effective September 3, 2010

This change replaced with ISAC or and/or coding.